CITY OF MANCHESTER.

REPORT

ON THE

Health of the City of Manchester,

1914.

BY

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Public Health Office,
Manchester,
20th August, 1915.

My Lord Mayor, Aldermen, and Councillors.

I have the honour to present to you my Report on the health of Manchester for the year 1914.

The death-rate for this year was higher than in the previous three years, while the birth-rate was almost the lowest on record.

The chief increases in the mortality for the year occur under Tuberculosis of the Lungs, Pneumonia, and infectious diseases.

The average price of each of the staple articles of food was higher than in previous years, and the position of the poorest class was relatively worse.

The institutional death-rate rose more than the home death-rate, and the death-rate in the poorer districts increased more than that in the better-off areas.

The increase in the death-rate is shown for both sexes and in every age-group. There was, however, no increase of infantile mortality.

Considerable activity was shown in the Health Visitors' department of work, under the strenuous guidance of Miss Howard, whose death is a permanent loss to the Department.

An effort was made to arrive at clearer ideas as to what would be entailed by an effort to cope with the mortality from Epidemic Diarrhœa. A Clinic was established by the Sanitary Committee at the Chorlton Dispensary, with the kind assistance of the Board of Management of that institution, and was carried on for three months under Dr. Mabel May. The Babies' Hospital received and treated a number of the worst cases. Cases were also received into the Infant Ward at Monsall Hospital. The results of treatment, whether with or without injections of normal salines, were satisfactory. But it was manifest that any effective effort to deal with Epidemic Diarrhœa by treatment must be very costly.

In fact it is quite evident that the best results, whether we measure by cost to the community or by results, are attained by prevention.

Amongst the most important means of prevention must be numbered the proper storage and the frequent periodic removal of horse manure. This has been found very difficult to effect. It is true the Public Health Act, 1875, and the Bye-laws provide legal remedies, but it has been by no means easy to bring these into effectual use. Yet this is one of the most important of public health measures.

A considerable diminution occurred in 1914 in the activity of the Housing Sub-Committee, so far as concerned the closing of houses. This was due primarily to the well-known appeal case. But other considerations have also had an effect.

No change took place during 1914 in the provision for the treatment of Tuberculosis, although this department of work sustained severe losses in its staff. The Veterinary Surgeon joined the Army. One of the Assistant Tuberculosis Officers also joined as a Sanitary Officer, and is now at the Dardanelles. Another accepted an appointment in London. It has not been found possible to make up these losses entirely. Other drafts also cannot be adequately filled.

It does not appear desirable to endeavour at the present time to make new appointments.

This difficulty applies to any new scheme entailing the appointment of responsible medical officials, and it is a serious one, since the whole success of any branch of work depends on the officers selected.

The War has provided new duties, such as the inspection from time to time of the camp, of hospitals, of premises from which food is supplied to the Army, and of billets. These duties have been divided amongst the staff.

A considerable amount of time was also given by the Medical Staff to the examination of Belgian Refugees, so as to avoid the importation of disease, about 1,000 having been inspected.

Dr. Sutherland devoted much time to inspection of the Red Cross Hospitals prior to their use.

The Executive Officer of the Midwives Supervising Committee, on the initiative of the Chairman of the Infant Life Preservation Sub-Committee, rendered valuable service in the provision of dinners for mothers and children, in the earlier period of the War, which was carried out by voluntary lady workers.

Delay has occurred in the completion of the buildings provided under the Tuberculosis Scheme, but this has been due in large measure to the splendid response for men which Manchester has made.

On the other hand, a great effort has been made to effect economies in administration consistently with the maintenance of a high standard of nutrition, and a successful one, so far as the hospitals are concerned.

The Chairman and Deputy-Chairman of the Sanitary Committee have been very energetic in the management of the hospitals.

The work of the Public Health Department, and the work of the Clinical Tuberculosis Officer, are set out in their respective sections.

The set-back in the death-rate from Tuberculosis of the Lungs may be ascribed to more than one cause. Probably a relative regression in the health of the poorest class is one factor. It may be that the primary effect of treatment was to produce in 1913 a prolongation of life and a consequent lowering of the death-rate, with a consequent increase in 1914.

Possibly, also, deaths are being assigned to Tuberculosis which were formerly ascribed to Bronchitis and Pneumonia.

Further experience is necessary before a positive opinion can be formed.

Attention is being increasingly given to judicious economies in foodstuffs. This has been brought more into view in the Public Health Department owing to the grant made by the Corporation for the nutrition and protection of families invaded by Tuberculosis. This branch of work will prove to be one of growing importance.

Benefit may be expected from the new Maternity and Infant Welfare Scheme. But this will entail careful observation, and will require cautious progress.

Although the housing operations of the Committee are reduced, the effects of the great efforts which have been put forth for many years to improve housing conditions, the drainage of the City, and the methods of refuse disposal are permanent, and in a sense these were nearing their completion.

It would have been a gratification to record a still further advance in the health of Manchester, but fluctuations must be expected to occur ; the recession is not a large one, and new means will be found to effect gains in health, which is the largest element in the wealth of the community.

I have to acknowledge the willing and effective assistance of my colleagues in the work of the department.

I have the honour to be,

Your obedient Servant,

JAMES NIVEN.

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ANNUAL REPORT.

STATISTICAL.

The following are general statistics for the year 1914:—

Area of the City in acres			20,799
Estimated population at the middle of 1914	Males	355,426	739,136
	Females	383,710	
No. of persons per acre			36
No. of families or separate occupiers at the Census taking, 1911			152,317
Persons married per 1,000 of population in the Manchester, Chorlton, and Prestwich Unions			16·94
Births in the City of Manchester	Males	9,462	18,697
	Females	9,235	
Annual birth-rate per 1,000 of population			25·30
Deaths	Males	6,524	12,386
	Females	5,862	
Recorded annual death-rate per 1,000 of population	Males	18·36	persons 16·76
	Females	15·28	
Deaths under 1 year of age per 1,000 births			128·63
Excess of registered births over deaths			6,311
Estimated increase of population during the year			7,580
Percentage mortality occurring in public institutions			32·34

From these figures it is seen that the marriage-rate in 1914 was 16·9 per 1,000 of the population, being lower than that for the two previous years, though higher than in previous years since 1907.

The birth-rate, on the other hand, was the lowest yet recorded, with the exception of that for the year 1912.

The death-rate was 16·76 per 1,000, showing an excess of nearly 1 per 1,000 over the death-rate for 1913, and exceeding the death-rates in 1910 and 1912.

The natural rate of increase was 8·54 per 1,000, the lowest rate on record, except that for the year 1901.

The deaths under 1 year of age gave a rate of 128·63 per 1,000 children born, being the lowest rate of infant mortality recorded, except that for 1912, which it does not much exceed.

The percentage of all deaths occurring in public institutions was the highest yet reached.

The distribution of these deaths is shown in the following table. The largest number of institutional deaths occur in the South Manchester Union, in the Manchester Union, and in the Royal Infirmary, though a considerable number occur in Ancoats Hospital, Monsall Hospital, in the Booth Hall Infirmary, and in St. Mary's Hospital.

Considerable increases in the number of deaths over previous years occur in the South Manchester Union, Monsall Hospital, the Manchester Union, and Booth Hall Infirmary. Outside the City a distinct increase in the number of deaths is observable also in the County Asylum, Lancaster.

The total increase amounts to 394 deaths.

TABLE 1.—POPULATIONS—DEATHS OF MANCHESTER RESIDENTS (INMATES), 1914, IN PUBLIC INSTITUTIONS.

Township	NAME OF INSTITUTION	Census Population, 1911	Deaths, 1914
ANCOATS	Ancoats Hospital	100	225
	Workhouse Casual Wards (Tame Street)	335	1
CENTRAL	New Bridge Street Workhouse	263	...
	St. Mary's Hospital	90	135
	Lock Hospital	29	...
	Eye and Ear Hospital	5	1
	Royal Infirmary (Central Branch)	...	1
	Chetham Hospital	...	...
	Skin Hospital	29	1
ST. GEORGE'S ...	Girls' Home (Charter Street)	...	...
CHEETHAM ...	His Majesty's Prison	1,048	9
	Boys' Refuge	172	...
	Northern Hospital (late Clinical)	58	54
	Jewish Hospital	28	31
CRUMPSALL ...	Manchester Workhouse	3,126	809
*	Prestwich Workhouse	583	4
BLACKLEY	Booth Hall Infirmary	331	298
	Litchford Hall	...	1
MOSTON	St. Mary's Home	...	8
	St. Joseph's Home	...	...
	St. Bridget's Orphanage	...	...
NEWTON.........	Monsall Hospital	265	254
	Little Sisters of the Poor (Culcheth Hall)	...	27
CLAYTON	Clayton Hospital	57	31
ARDWICK	Industrial School	200	...
	Nicholls Hospital	...	...
OPENSHAW	Crossley's "Home of Peace"	6	...
RUSHOLME......	St. Joseph's Girls' School	174	...
	St. Mary's Home	...	...
CHORLTON-ON-MEDLOCK	Royal Infirmary	454	489
	St. Joseph's Boys' School	384	...
	Royal Eye Hospital	121	1
	Little Sisters of the Poor (Plymouth Grove)	...	20
	Cancer Hospital	23	18
	Ear Hospital	14	9
HULME	Hulme Barracks	...	1
	Loretto Convent	..	1
MOSS SIDE	"The Home," Whalley Road	...	4
WITHINGTON ...	South Manchester Workhouse	2,965	1145
LEVENSHULME ...	The Poor Clares Convent	...	...
	Military Hospitals	...	14

* Proportion only.

TABLE I (continued).—POPULATIONS—DEATHS OF MANCHESTER RESIDENTS (INMATES), 1914, IN PUBLIC INSTITUTIONS.

Township	NAME OF INSTITUTION	Census Population, 1911	Deaths, 1914
OUTSIDE CITY	Macclesfield Asylum	...	2
	Cheadle Asylum	...	8
	Whittingham Asylum	...	9
	Winwick Asylum	...	33
	Baguley Sanatorium	...	67
	Prestwich Asylum	...	52
	Pendlebury Hospital	...	61
	Salford Royal and Hope Hospitals	...	16
	Hull City Asylum	...	3
	Blackburn, Langho Colony	...	4
	Stockport Infirmary	...	3
	County Asylum, Lancaster	...	86
	Salford Union Hospital	...	4
	Stepping Hill Poor Law Hospital	...	6
	Rochdale Workhouse	...	2
	Barnes Convalescent Home	...	8
	Other Hospitals, each having 1 death	...	43
	Other Workhouses, each having 1 death	...	7
	TOTAL DEATHS		4,006

The chief causes of death are exhibited in the following figures, which show that the greatest increase over 1913 occurs under Tuberculosis of the Lungs and under Pneumonia.

Marked increases also show themselves under Old Age, Nephritis, Scarlet Fever, Whooping Cough, and Measles.

Diminutions are little in evidence, only one distinct diminution occurring under the head of Atrophy and Debility.

The chief causes of death during the year were as follows:—

	1913	1914			1913		1914
Tuberculosis of the Lungs	1056	1257	Premature Birth		389		409
Tuberculosis of Organs other than the Lungs	383	366	Nephritis and Bright's Disease		301		369
Diseases of the Heart	1012	1048	Convulsions		72		79
Cerebral Hæmorrhage, Apoplexy, Hemiplegia	497	490	Inflammation of the Brain		125		110
Pneumonia	1178	1289	Diarrhœa and Dysentery		622		524
Bronchitis	1127	1136	Measles	259	597	293	847
Digestive Organs	557	538	Scarlet Fever	94		160	
Atrophy, Debility (chiefly in infants)	350	305	Whooping Cough	139		283	
Old Age	435	502	Dipththeria	105		111	
			Influenza		122		113
			Malignant Disease		727		738

The following table gives a summary of the gains and losses in the death-rate of 1914, as compared with that for the 10 years 1904-13. The balance of gain is only 1 per 1,000.

The largest gains are under Diarrhœal Diseases, Bronchitis, Pneumonia, and Measles.

The losses are of a smaller order, being highest under the heads Old Age, Diseases of the Urinary System, Cancer, and Scarlet Fever.

Gains in 1914 *per* 1,000 *persons living, as compared with the average for the* 10 *years,* 1904–1913—(See Table K).

Measles	0·16
Diarrhœal Diseases	0·25
Diphtheria	0·02
Enteric Fever	0·05
Erysipelas	0·01
Pyæmia	0·03
Tubercular Diseases (other)	0·10
Alcoholism	0·01
Premature Birth	0·06
Nervous Diseases	0·14
Heart and Blood Vessel Diseases	0·12
Bronchitis	0·24
Pneumonia	0·17
Respiratory Diseases (other)	0·04
Digestive System	0·08
Total	1·48

Losses in 1914.

Scarlet Fever	0·07
Whooping Cough	0·01
Cancer	0·09
Rheumatic Fever	0·03
Old Age	0·19
Urinary System	0·09
Total	0·48

Balance of Gain from Above Causes	1·00
Do. All Causes	0·88

The following figures show the prices of staple commodities, and the number of persons in receipt of relief. These figures throw light on the conditions affecting the poorest classes, though they require a table of wages to complete their significance. It will be seen that the average price of each of the staple articles of food, as well as of coal, had advanced during the year. There was also some increase of pauperism over the two preceding years. Undoubtedly the condition of the poorest class suffered during this year.

TABLE 2.—TOWNSHIP OF MANCHESTER.—PRICES PAID BY THE GUARDIANS FOR FLOUR, BUTCHERS' MEAT, AND COAL, ALSO THE AVERAGE WEEKLY NUMBER OF PERSONS IN RECEIPT OF RELIEF, DURING THE YEARS 1887–1914.

YEAR ENDING	PRICES OF PROVISIONS						PAUPERISM		CITY BIRTH-RATE PER 1,000
	Flour per Sack of 280lbs.	Butchers' Meat, per lb.			Coal, per ton		Average number of Paupers relieved in each week		
		Beef		Mutton	Engine	House			
		Coarse	Fine				Indoor	Outdoor	
1887	25/2 to 30/6	-/3¾	-/6½	-/6½	5/6	8/4	3123	877	33·9
1888	24/- to 29/3	-/3¾	-/6½	-/6½	5/5	8/3	3130	713	33·3
1889	24/11 to 31/2	-/4½	-/6½	-/6½	5/8	8/7	3037	632	33·1
1890	24/9 to 29/11	-/5	-/7	-/7	7/-	9/9	2998	498	31·8
1891	27/3 to 28/11	-/4¼	-/6½	-/6½	8/8	11/2	3118	466	33·8
1892	26/4 to 28/5	-/4	-/6¼	-/6¼	7/6	10/2	3251	551	33·4
1893	21/8 to 25/1	-/3⅞	-/6¼	-/6¼	6/5	10/0	3277	586	33·4
1894	17/2 to 23/9	-/3¾	-/6	-/6	7/1	10/10	3328	395	31·8
1895	15/6 to 21/-	-/3¾	-/6	-/6	5/6	10/3	3343	618	33·4
1896	16/6 to 24/-	-/3⅝	-/5¾	-/5¾	5/7	9/1	3348	533	32·8
1897	17/3 to 33/9	-/3½	-/5⅝	-/5⅝	5/9	8/8	3476	697	32·9
1898	26/7 to 33/8	-/3½	-/5½	-/5½	6/2	8/4½	3519	732	32·3
1899	20/11 to 23/-	-/3½	-/5⅝	-/5⅝	7/5	9/11	3232	597	32·2
1900	20/9 to 22/9	-/3½	-/5½	-/5⅝	11/9¾	14/2½	3189	686	32·4
1901	21/4 to 23/3	-/3⅝	-/5⅝	-/5⅝	11/8	15/2	3403	817	28·7
1902	20/11 to 24/3	-/3⅞	-/5¾	-/5¾	9/3	13/5½	3492	752	33·0
1903	21/10½ to 23/3	-/4⅜	-/6	-/5½	9/-	12/11¼	3521	812	31·7
1904	23/- to 28/6	-/4⅜	-/6	-/6	8/2	11/11	3486	1459	31·1
1905	23/- to 23/9	-/4⅜	-/6	-/6	7/6	10/9	3489	1588	30·1
1906	20/6 to 26/-	-/4¼	-/6	-/6	8/6	11/9	3359	1257	30·1
1907	20/3 to 25/6	-/4	-/6	-/5¼	11/2	14/5	3354	909	29·4
1908	25/6 to 29/6	-/4⅛	-/6	-/5⅜	11/2	14/6	3597	1199	30·0
1909	26/3 to 27/10½	-/3½	-/5½	-/4⅜	9/9	13/3	3875	2049	28·5
1910	26/3 to 27/4	-/3¾	-/6	-/4¾	9/6	13/3	3987	1570	27·8
1911	25/4½ to 28/3	-/3¾	-/6¼	-/4¾	10/4	13/8	3839	1178	25·9
1912	25/10 to 28/6	-/3⅞	-/6¼	-/5½	12/2	16/3	3640	973	25·1
1913	24/9 to 28/9	-/4⅛	-/6⅝	-/5¾	13/1¾	16/4½	3431	685	25·6
1914	26/- to 33/6	-/5½	-/7	-/6	13/5	16/7	3414	1039	25·3

The death-rate for the year is shown in the next table for each of the main Sanitary Divisions of the City, and for each of the Sanitary Districts, divided into portions according as the deaths occur at home, in the Union Hospitals, or in other public institutions. Each of these sections shows for the whole City an increase in the death-rate over that in the corresponding section for 1913.

The increase in the death-rate at home in 1914 over that in 1913 is nearly 4 per cent; in the death-rates belonging to the Union Hospitals, 12·82 per cent. ; in the death-rate of other institutions, 9·86 per cent. This may be accepted for the whole City as showing that the poorest classes have suffered most.

These figures agree with the inferences which may reasonably be attached to the table showing the price of staple commodities and the extent of pauperism.

The same conclusion may be drawn from the facts that the death-rate of the Manchester Township increased by 8·25 per cent., while the increase in North Manchester was 3·85 per cent., and in South Manchester 2·81 per cent.

TABLE 3.—1914.—DEATH-RATES* IN THE HOMES OF THE PEOPLE, IN WORKHOUSES, AND IN HOSPITALS FOR THE VARIOUS DIVISIONS OF THE CITY.

Statistical Divisions		Estimated Populations to middle of 1914	Death-rate per 1000 of persons dying in their own homes	Death-rate per 1000 of persons dying in Workhouses	Death-rate per 1000 of persons dying in Hospitals	Total death-rate per 1000	Mean death-rate 1904–1913
City of Manchester. ...		739,136	11·34	3·08	2·34	16·76	17·64
I.	Manchester Township..	110,603	15·09	7·31	3·63	26·02	24·76
II.	North Manchester	209,114	10·80	1·46	2·18	14·43	14·76
III.	South Manchester	419,419	10·62	2·77	2·08	15·47	16·75
I.	Ancoats	39,831	16·67	6·45	3·97	27·09	24·57
	Central	20,633	11·73	9·01	5·14	25·88	26·07
	St. George's	50,139	15·22	7·28	2·73	25·23	24·33
II.	Cheetham	44,218	7·76	1·70	2·46	11·92	11·73
	Crumpsall	10,608	9·80	1·79	1·51	13·10	13·08
	Blackley	14,914	10·06	0·60	1·14	11·80	15·81
	Harpurhey	17,531	11·52	1·65	2·40	15·57	13·36
	Moston	26,664	9·30	0·64	1·54	11·48	11·60
	Newton	42,988	11·96	1·65	2·70	16·31	17·53
	Bradford	25,617	13·16	1·87	2·50	17·53	18·92
	Beswick	12,174	13·96	1·64	2·14	17·74	18·16
	Clayton	14,400	13·19	1·18	1·74	16·11	13·44
III.	Ardwick	39,621	11·33	3·33	2·65	17·31	17·33
	Openshaw	32,064	12·44	2·53	1·90	16·87	17·97
	West Gorton	26,884	11·75	3·39	2·57	17·71	16·60
	Rusholme and Kirk. ...	43,833	7·51	0·91	1·53	9·95	13·89
	Chorlton-on-Medlock ..	54,192	12·11	5·55	2·86	20·52	19·05
	Hulme	62,698	13·64	5·06	2·60	21·29	22·07
	Moss Side...............	35,823	9·16	1·34	1·98	12·48	13 05
	Withington...............	55,572	8·80	1·17	1·42	11·39	10·33
	Gorton	46,095	10·07	1·52	1·52	13·10	15·64
	Levenshulme	22,637	7·42	0·80	1·46	9·67	10·55

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* In this table, *every death* occurring in a Public Institution has been referred to the District from which the patient originally came.

Table 4 shows the death-rates of males and females respectively in successive years. The relative magnitudes of these death-rates undergoes but little change. In 1914 the male death-rate exceeded the female by 3·08 per 1,000.

TABLE 4.

Annual Death-rates—Male and Female.

	Male	Female
1905	19·45	16·31
1906	20·65	17·47
1907	19·52	16·40
1908	19·87	16·47
1909	18·88	16·62
1910	17·37	14·51
1911	18·73	15·64
1912	17·68	14·79
1913	17·31	14·35
1914	18·36	15·28

The next table shows the death-rates at 12 groups of ages for the whole City, for persons, and for males and females respectively.

The death-rates in 1914 are higher at every age group than in 1913: at the lower ages because of the higher mortality from Infectious Diseases, at higher ages because of the increased death-rate from Phthisis and Pneumonia.

This increase in the death-rates applies to both sexes.

The male death-rate exceeds the female at every age group except 15-19.

LE 5.—ANNUAL RATES OF MORTALITY IN MANCHESTER IN THE YEAR 1914 AT TWELVE GROUPS OF AGES AMONGST PERSONS—MALES AND FEMALES.

PS	PERSONS			MALES			FEMALES		
S	Population	Deaths	Rate	Population	Deaths	Rate	Population	Deaths	Rate
es	739,136	12,386	16·76	355,426	6,524	18·36	383,710	5,862	15·28
-	79,783	3,925	49·20	40,100	2,131	53·14	39,683	1,794	45·21
-	73,659	326	4·43	36,601	167	4·56	37,058	159	4·29
-	68,459	208	3·04	34,043	104	3·06	34,416	104	3·02
-	65,778	261	3·97	32,089	117	3·65	33,689	144	4·27
-	65,679	277	4·22	30,674	152	4·96	35,005	125	3·57
-	133,695	689	5·15	62,962	383	6·08	70,733	306	4·33
-	108,179	1,116	10·32	52,420	627	11·96	55,759	489	8·77
-	72,113	1,328	18·42	34,643	754	21·76	37,470	574	15·32
-	43,485	1,616	37·16	20,474	907	44·30	23,011	709	30·81
-	22,483	1,655	73·61	9,414	801	85·09	13,069	854	65·35
-	5,336	850	159·30	1,868	342	183·08	3,468	508	146·48
	487	135	277·21	138	39	282·61	349	96	275·07

The rate of mortality in the first year of life is, however, relatively favourable, being the lowest in any year except 1912, and this notwithstanding a comparatively high mortality from Whooping Cough.

TABLE 6.—INFANTILE MORTALITY.

Deaths per 1000 *births at the ages* 0–2 *months,* 3–5 *months, and* 6–11 *months, in successive years.*

YEARS	Months of Age			
	0–2	3–5	6–11	Under 1 year
1891–95 (mean)	82·79	40·99	62·97	186·75
1896	78·71	38·11	59·31	176·13
1897	82·31	42·43	69·89	194·63
1898	86·64	42·72	66·51	195·87
1899	88·14	46·49	70·79	205·42
1900	81·42	42·42	64·91	188·75
1901	88·90	42·96	66·60	198·46
1902	73·49	32·23	45·73	151·45
1903	79·91	36·37	52·25	168·53
1904	84·37	42·01	60·34	186·72
1905	78·42	34·05	46·28	158·75
1906	78·65	35·77	54·68	169·10
1907	73·91	30·46	43·07	147·44
1908	76·20	30·09	46·16	152·45
1909	73·20	25·37	36·98	135·55
1910	67·50	23·90	40·44	131·84
1911	79·50	31·81	44·80	156·11
1912	65·31	19·70	37·26	122·30
1913	68·76	24·42	35·52	128·70
1914	68·19	23·16	37·28	128·63

Causes of Death.

A comparison of the death-rates at all ages from various groups of diseases, and from the principal infectious diseases, is furnished for a long series of years by Tables F and E in the Appendix.

From these we see that the death-rate from Tuberculosis of the Lungs has again risen, while there is no rise under other forms of Tuberculosis.

The only other marked increases shown in Table F are under Diseases of the Urinary System, and accidents of Childbirth.

From Table E we see that the death-rate is comparatively high from Scarlet Fever and Whooping Cough, though there is no marked excess over the average under any disease except Scarlet Fever. From Enteric Fever the death-rate is lower than in any previous year.

Table K in the Appendix gives a comparison of death-rates from the principal disease headings in 1914 and in the 10 years 1904-13. From this table we see that the death-rates exceed the average from Scarlet Fever, Whooping Cough, Cancer, Rheumatic Fever, Urinary Diseases, and Old Age. The death-rate from Tuberculosis of the Lungs is equal to the average of the previous 10 years, while from other forms of Tuberculous Disease it is under the average.

From all other forms of disease it is below the average, and is much below the average from Measles, Enteric Fever, Diarrhœa, Pyæmia, Septicæmia, and from Respiratory Diseases.

Table M enables us to make a comparison of the death-rates in 1914, and the 10 years 1901-10, from the main groups of diseases at six successive age groups.

The death-rate from Enteric Fever is reduced at every age group.

At ages under 5, the death-rate is under the average from every cause of death with the exceptions of Scarlet Fever, Whooping Cough, and Malignant Disease.

At ages 5–14 the death-rate is above the average from Scarlet Fever, Tuberculous Disease, Diseases of the Nervous System, and Diseases of the Respiratory, Digestive, and Urinary Systems. The death-rate from all causes is somewhat above the average.

At ages 15–24 the death-rate from all causes is also above the average. The excesses occur under the heads of Scarlet Fever, Tuberculous Disease, Malignant Disease, and Diseases of the Nervous System.

At ages 25–44 the death-rates are generally below the average, the exceptions being under Scarlet Fever and Disease of the Digestive System.

At ages 45–64 the death-rate is also below the average, although excesses occur under Malignant Disease, Diseases of the Urinary System, and Diphtheria.

At ages 65 and upwards the death-rate is below the average, the only excess being under Malignant Disease.

Particulars respecting infant mortality from various causes are given in Tables D, I, and Table 7, which is inserted below.

From Table I we perceive that infantile mortality in 1914 was higher than in 1913 from Whooping Cough, from Infectious Diseases generally, from Convulsions, Lung Diseases, and Premature Birth, but lower from Diarrhœa, Tuberculous Disease, and Atrophy.

From Table D we see that while infantile mortality was lower in 1914 than in 1913 in the first two three-monthly periods, it was higher in the last six months of the first year, and in each of the following years of life under the age of five.

The diminution in the first six months of life is greatest under the unclassified causes of death, but is also marked under Diarrhœa and Atrophy.

The excess in the last six months of the first year is chiefly under the head of Whooping Cough.

The excess of mortality in the second year of life in 1914 is under the heads Measles, Scarlatina, Whooping Cough, Diphtheria, Lung Diseases, and unclassified deaths. There are, however, fewer deaths from Diarrhœa.

In the third year, 1914 shows an excess in respect of the Infectious Diseases, Lung Diseases, Tuberculous Disease, and unclassified deaths, but a diminution under Diarrhœa.

In the fourth year of life there is an excess under Scarlet Fever, Whooping Cough and Diphtheria, Tuberculosis, Brain Disease, and Lung Disease.

In the fifth year the excess in 1914 is slight, and is divided among a number of causes.

The Local Government Board return is given below, and may be compared with that for the previous year.

Table 7.—Infant Mortality.

Manchester District.

1914.—*Deaths from stated causes at various Ages under* 1 *Year of Age.*

Causes of Death	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total Deaths under 1 year
causes { Certified	443	159	132	81	815	459	429	382	319	2,404
causes { Uncertified	1	..	..	..	1	..	..	..	..	1
mall-pox	..	..	..	..	..	..	..	..	..	..
hicken-pox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	1	1	..	3	20	42	66
carlet Fever	..	1	..	..	1	..	..	1	2	4
Whooping Cough	..	..	1	1	2	13	29	39	34	117
Diphtheria and Croup	..	..	..	1	1	..	1	4	6	12
Erysipelas	..	..	..	..	..	2	..	1	..	3
Tuberculous Meningitis	..	..	1	..	1	2	6	12	7	28
Abdominal Tuberculosis	..	..	..	..	..	4	11	8	4	27
Other Tuberculous Diseases	..	..	..	..	..	1	10	5	6	22
Meningitis (*not Tuberculous*)	1	2	1	1	5	2	7	8	8	30
Convulsions	13	9	7	3	32	13	10	7	4	66
Laryngitis	..	..	..	..	..	..	..	2	..	2
Bronchitis	2	4	6	5	17	39	45	32	27	160
Pneumonia (all forms)	2	2	5	4	13	31	70	98	90	302
Diarrhœa	..	6	5	3	14	41	43	34	17	149
Enteritis	..	9	11	6	26	82	73	50	33	264
Gastritis	..	4	3	..	7	19	4	8	..	38
Syphilis	1	6	8	3	18	18	15	1	1	53
Rickets	..	..	..	..	..	1	..	5	5	11
Suffocation, overlying	11	5	4	2	22	30	18	1	2	73
Injury at birth	33	4	1	..	38	..	..	..	..	38
Atelectasis	25	2	1	..	28	3	..	1	..	32
Congenital Malformations	18	12	5	4	39	10	9	3	..	61
Premature Birth	258	46	32	18	354	47	7	..	1	409
Atrophy, Debility, and Marasmus	53	37	31	17	138	72	40	22	9	281
Other Causes	27	10	10	12	59	29	28	20	21	157
Totals	444	159	132	81	816	459	429	382	319	2,405

Nett Births in the year { legitimate, 17,904.
{ illegitimate, 793.

Nett Deaths in the year of { legitimate infants, 2,200.
{ illegitimate infants, 205.

STATISTICS RELATING TO THE SANITARY DISTRICTS OF THE CITY.

Table G shows the births, deaths, birth-rates, death-rates, and natural rate of increase for each of the main divisions of the City, and also for each of the Sanitary Districts.

The birth-rate is lower than in 1913 but higher than in 1912, and shows some sign of being arrested.

It is higher than in 1913 in the Central Division of the City, but lower in North and South Manchester. It is possible that this is due to changes in the population, in part at least.

The death-rate, however, is higher in all three divisions. In individual districts the birth-rate fluctuates, being in some higher, in others lower, than in 1913. The tendency to a high birth-rate in the industrial and in the poorer districts continues.

The districts showing the lowest death-rate in 1914 are Blackley and Rusholme. Harpurhey and Clayton exhibit a high death-rate compared with their average.

The illegitimate birth-rate was somewhat higher than in 1913, and, as usual, was higher in the Central Division and in South Manchester than in North Manchester.

The highest illegitimate rates were in the Central District and in Chorlton-upon-Medlock. The rate of infantile mortality for illegitimate infants was more than twice as high as the legitimate in South Manchester.

Table 4 shows the extent and manner in which deaths are certified in the Sanitary Districts. Over 10 per cent. of deaths were certified by the Coroner in the Manchester Township, as against 6·7 and 7·3 per cent. respectively in North and South Manchester. On the other hand only 0·1 per cent. escaped certification in the Manchester Township, as against 0·4 per cent. in North Manchester and 0·2 per cent. in South Manchester. This would seem to imply that Coroner's inquests are held more especially in the Manchester Township, as is right.

A comparison of the death-rates at groups of ages from the chief causes of death in the three main divisions of the City is given in Table N.

As this comparison is increasingly inaccurate with the increasing distance from the census, it will be discontinued next year.

The main features of these figures do not change. There is the same persistence from year to year of a comparatively high Diarrhœal rate in the Manchester Township under 5 years of age, and the same excess of Respiratory mortality at this period of life.

At higher ages there is a great disparity at each age-period between the Tuberculous death-rate in the Manchester Township and in the other two divisions, increasing as age advances.

A lesser excess of mortality holds in the Manchester Township from Diseases of the Heart and Blood Vessels, and from Diseases of the Respiratory System.

The features of the year to which special attention may be drawn are (1) the greater extent to which the death-rate has increased in the Manchester Township, as compared with the other main divisions of the City; (2) the increase in the death-rate from Tuberculosis of the Lungs.

It is probable that these represent one fact, viz., increased pressure on the poorest class, since Tuberculosis reacts very quickly to social circumstances.

In former reports it has been pointed out that the pressure of social conditions is reflected in the death-rates from a group of causes in the Manchester Township. This is well seen in Table K of the Appendix, which shows the relatively high death-rate of the Manchester Township under the heads Measles, Whooping Cough, Diarrhœa, Tuberculosis of the Lungs, Bronchitis, Pneumonia, and Diseases of the Urinary Organs. This feature is less marked in the cases of Heart Disease and Bronchitis.

It has been already seen that the discrepancy is greater between the Manchester Township and the other divisions in 1914 than in 1913.

NOTIFICATION OF INFECTIOUS DISEASE.

The report of the Local Government Board giving statistics of the incidence of notifiable infectious diseases, furnishes a complete survey of their course for the whole of England and Wales, and enables us to see how far the course of each of these diseases is local, and how far it is governed by more general influences.

We know that Scarlet Fever is subject to seasonal and periodic waves in each separate locality, and, although the length of the periodic wave is not invariable, it is possible within narrow limits to forecast the course which the periodic wave will take, and so to determine the stress which will fall on the hospital.

Experience appeared to show that the periodic wave occurred at different periods in different localities, and that it does not affect the country as a whole. The returns of the Local Government Board show that the notified cases of Scarlet Fever have increased during the last four years, rapidly in 1913 and 1914.

Are we to infer that there are general climatic or other causes in operation causing this increase, as distinguished from those forces which produce the periodic wave, or it may be coincident with them ?

The only answer to this question is an appeal to the figures.

EXTRACT FROM THE LOCAL GOVERNMENT BOARD REPORT SHOWING THE NUMBER OF CASES OF SCARLET FEVER NOTIFIED IN A NUMBER OF LARGE CENTRES IN THE YEARS 1911–14 :—

	1911	1912	1913	1914
London	10,500	11,328	17,568	25,011
Newcastle	793	1,181	971	1,720
Hull	557	322	385	630
Leeds	1,627	1,224	1,314	1,352
Sheffield	1,385	1,737	3,582	3,091
Liverpool	3,663	2,833	2,228	3,677
Manchester	2,302	2,088	3,901	5,180
Birmingham	2,560	5,922	8,675	6,915
Nottingham	484	1,119	1,004	948
Leicester	1,305	1,277	549	573
Salford..	916	545	1,235	2,266
Bradford	594	645	526	463

From these figures we see that, while the course of Scarlet Fever in England and Wales is very much the same as in London and Manchester, it does not coincide with the course pursued in a number of centres.

In Sheffield the maximum is attained in 1913, in Birmingham in 1913, in Nottingham in 1912, in Leicester in 1911, in Bradford in 1912.

In Salford the disease pursues the same course as in Manchester.

From these figures, and from the figures for the administrative counties, it is evident that the periodic wave does not follow the same course in all localities. Nevertheless the tendency to an increase in 1914 is very general. It is not easy to reconcile these facts. There will, of course, be a general tendency for the periodic wave to arrive at the same period in different localities owing to the facilities for travel which exist all over the country.

This tendency will be especially marked near such centres as London and Manchester, and if the wave in these centres coincides the tendency will be strengthened.

It may be that, in some such way, an aggregate wave for England and Wales will be produced.

It is very doubtful how far such a wave can be regarded as the result of atmospheric influences.

At all events these are not able always to produce like effects in different localities.

In Manchester the figures show two periodic waves each of seven years' duration.

The steady accumulation of these figures will, no doubt, show with increasing clearness the manner in which the behaviour of Scarlet Fever over the country generally is related to its behaviour in particular localities.

It has been suggested that Scarlet Fever is caused by a micro-organism of the streptococcus group, and its behaviour clinically is not inconsistent with this suggestion. It is, therefore, of some interest to see what course the number of cases of Erysipelas notified year by year has followed in the large centres which have been selected for comparison.

These have, therefore, been taken out. They show very much the same course as that pursued by Scarlet Fever, and, in fact, the rise in the number of cases in 1914 is even more general than in the case of that disease.

These rises are especially conspicuous where the rises in Scarlet Fever are decided.

ERYSIPELAS.

	1911	1912	1913	1914
London	4,904	4,137	4,159	4,969
Liverpool	949	859	767	900
Manchester	483	433	437	588
Salford..	217	177	203	249
Leicester	143	164	190	263
Newcastle	188	155	181	251
Nottingham	205	200	191	254
Hull	205	209	171	216
Bradford	293	234	223	240
Leeds	357	286	387	512
Sheffield	440	445	486	491
Birmingham	632	767	808	894

The concordance, it is true, is not invariable, but it is quite unmistakable.

It will be remembered, also, that the annual course of these two diseases is much alike, and that the seasonal wave reaches its apex about the same time.

These figures, then, suggest that a special influence was at work in 1914, of a general character, favouring the increase of both diseases.

The question presents itself whether these diseases have been mutually confounded. But we may dismiss the idea that such a degree of confusion has existed as would produce the figures shown in the tables.

Manchester does not show a conspicuously high rate of incidence in respect of Erysipelas.

Thus, out of the 17 County Boroughs in Lancashire, in 1911 there were nine having a higher rate, in 1912 eight, in 1913 eleven, and in 1914 ten.

The relative position in respect of Scarlet Fever is less favourable. In 1911 eight, in 1912 five, in 1913 four, and in 1914 four had a higher rate of incidence.

Puerperal Fever is produced by micro-organisms of different characters, principally streptococci, but including also staphylococci, coli-bacilli, and gonococci. The notification of Puerperal Fever will vary with the opinion of the practitioner as to what constitutes a definite case. Special efforts have been made in Manchester to make the term as wide-embracing as possible, with the result possibly that the rate of incidence has been relatively increased. At all events it remains high.

Thus in 1911, 1912, and 1913 Manchester had the highest rate of incidence amongst the 17 Lancashire County Boroughs, and in 1914 only St. Helen's had a higher rate. There can be very little doubt that the explanation given is the correct one.

Thus in 1912 the notification rate in Manchester was 0·19, in Liverpool 0·05, in Salford 0·11.

The corresponding death-rates were, for Manchester 0·031, Liverpool 0·034, Salford 0·03.

Special precautions are taken by examination of the death registers to ensure that no death from Puerperal Fever passes undetected. We may infer from these figures that the rate of incidence is a matter of custom in the different localities.

This rate shows a tendency to diminish in Manchester. For the reasons above given it is not certain how far this is matter for satisfaction.

The figures given for Poliomyelitis in the 1914 report suggest that a definite cause comes into operation in autumn. This may be the presence of stomoxys, as suggested by some experiences. The evidence is not yet sufficient to clear up this question.

The figures do not afford any suggestion in respect of Cerebro-Spinal Fever.

The numbers of cases of Smallpox and Typhus Fever are too few at present for classification, though a vigilant look-out for both diseases is necessary.

The discovery of a specific bacillus for Typhus Fever by a young American bacteriologist, Dr. Plotz, is announced, and a protective vaccine has been prepared.

This discovery, if confirmed, should go far to bring about the arrest of the disease. Typhus travels slowly, no doubt, but the conditions of modern warfare are specially favourable to its extension.

The number of cases of Diphtheria has ascended during the last three years in Manchester, following a similar course to the cases of Scarlet Fever.

The Local Government Board shows that this is the case for the country as a whole.

Moreover, the periods at which the seasonal ascents of Diphtheria and Scarlet Fever reach their maxima are nearly the same.

Nevertheless the diseases own widely different bacterial causes, and are very different in their character.

The concordance in the weekly number of cases is well marked in recent years in Manchester. But if we refer to the figures given in the report of the Local Government Board we find that this concordance is by no means universal for the different County Boroughs, though there is observed a general tendency for the two diseases to increase and decline together.

Between this disease and Scarlet Fever there is an excusable confusion, and to some extent their concomitant rise and fall may be thus explained. Moreover, at times Scarlet Fever shows a special tendency to be associated with the presence of Diphtheric bacilli in the throat, and with other symptoms of Diphtheria.

There is sufficient resemblance and association between these diseases to render the hypothesis probable that the increase in 1914 in the notified cases of Diphtheria is due to its association with Scarlet Fever, notwithstanding that in many localities the disease is diagnosed largely on examination of swabs from the throat.

The simultaneous increase in many localities would be subject to the same influence of diffusion from large centres as Scarlet Fever.

Practically the important point from the administrative side are that Scarlet Fever is subject to periodic waves, and its course can to a certain extent be foreseen, while that of Diphtheria may be expected in general to agree.

Enteric Fever has also a well-marked seasonal wave, which culminates at an earlier period than that of Scarlet Fever. In the case of Enteric Fever we may dismiss the idea of diffusion from large centres, and this disease will thus serve as a test as to how far season by itself influences its course year by year. The figures showing the course of the disease for four years are as follows.

From these we perceive that there was a general increase in 1911, a year of high temperature in summer, and conspicuous for its high Diarrhœal death-rate.

In 1914 there is a slight increase in the general incidence rate of Enteric Fever, but a marked fall in Manchester. There is a similar marked fall in the rate of incidence for the aggregate of Boroughs and Urban Districts, as well as for the Rural Districts in the County of Lancaster.

It would thus appear that this disease is subject to seasonal influences, but that these influences act in different ways in different parts of the country.

The figures corresponding to those for Scarlet Fever further emphasise this view, showing, as they do, that the general trend is towards a diminution of the disease in the large centres, notwithstanding that it is slightly increased over England and Wales.

ENTERIC FEVER.

The Rate of Incidence per 1,000 *living in England and Wales, London, Manchester, the aggregate Boroughs and Urban Districts of Lancashire, and the Rural Districts of Lancashire.*

	England and Wales	London	Manchester	Aggregate of Boroughs and Urban Districts of Lancashire	Rural Districts of Lancashire
1911	0·38	0·23	0·41	0·64	0·48
1912	0·23	0·16	0·38	0·38	0·25
1913	0·22	0·17	0·45	0·50	0·47
1914	0·24	0·17	0·22	0·37	0·29

Number of Cases of Enteric Fever notified in 1911–14.

	1911	1912	1913	1914
England and Wales	13,730	8,262	8,117	8,778
London	1,024	701	762	773
Newcastle	85	81	132	101
Hull	335	134	152	226
Leeds	123	66	87	84
Sheffield	253	166	76	107
Bradford	196	257	73	79
Liverpool	152	96	122	120
Manchester..	295	274	327	158
Salford..	110	74	112	63
Birmingham	135	113	113	77
Nottingham	207	79	36	36
Leicester	148	54	22	18

It is not easy to interpret these figures.

It may be that the continued efforts to deal with the danger of spread by shellfish, flies, and collections of excreta, however imperfect, yet suffice in large centres to maintain a continued improvement.

An impression is also produced that in the case of Enteric Fever there is wanting some element tending to the production of a general increase or diminution of the disease, which is present in Scarlet Fever and Diphtheria, and this element may be the greater and more rapid diffusion of the latter diseases by the movements of the population.

INFECTIOUS DISEASES.

The diseases included in the Infectious Disease (Notification) Acts, 1889 and 1899, ar follows: Smallpox, Scarlet Fever, Diphtheria, Membranous Croup, Typhus Fever, Enteri Typhoid Fever, Relapsing Fever, Continued Fever, Puerperal Fever, Erysipelas, and Asi Cholera, to which have been added Ophthalmia Neonatorum, Cerebro-Spinal Fev and Poliomyelitis. The following cases were notified in 1914, and the numbers compared with the average of the previous ten years:—

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Aver'ge for 10 Years	19
Smallpox	134	6	5	5	...	...	...	..	1	1	15	.
Scarlet Fever ...	2,063	1,975	3,075	2,732	2,893	3,700	2,324	1,939	1,840	3,715	2,626	4,7
Diphtheria...... Memb. Croup	474	530	551	499	546	598	498	472	474	650	529	7
Typhus Fever ...	...	...	...	1	...	20	2	10	...	...	3	
Enteric Fever ...	325	345	384	265	393	369	358	256	242	292	323	1
Relapsing Fever	...	...	1	...	...	...	...	...	...	...	...	.
Puerperal Fever	42	82	106	95	101	84	131	130	124	124	102	1
Erysipelas	266	351	383	337	364	371	407	442	396	412	373	5
Ophthalmia Neonatorum	...	...	...	...	...	...	246	443	503	331	...	4
Cerebro-Spinal Fever	...	...	...	...	...	...	...	...	6	1	...	
Poliomyelitis ...	...	...	...	...	...	...	...	...	55	6	...	
	3,304	3,289	4,505	3,934	4,297	5,142	3,966	3,692	3,641	5,532	3,971	6,6

The number of deaths for eleven years from the more common diseases is shown the following table, also the average for the previous ten years :—

From	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Aver'ge for 10 Years	191
Measles	425	231	475	229	366	396	291	337	490	259	350	2
Scarlet Fever ...	85	78	108	102	92	164	74	45	51	94	89	1
Diphtheria...... Memb. Croup	99	127	119	106	123	113	101	88	97	105	108	11
Enteric Fever ...	66	55	83	37	75	88	61	51	47	48	61	3
Smallpox	9	...	...	...	...	...	...	...	1	...	1	...
Influenza	97	95	90	111	132	135	80	80	96	122	104	11
Whooping Cough	280	195	193	314	220	129	397	140	298	139	231	28
	1,061	781	1,068	899	1,008	1,025	1,004	741	1080	767	944	99

SMALLPOX.

There were no cases of Smallpox notified during the year 1914.

SCARLET FEVER.

By Dr. W. Allan Young.

Scarlet Fever was unusually prevalent throughout the City during 1914. The total number of cases notified was 4,712.

Table No. 1 shows the incidence of attacks during the year.

Table 1.—Scarlet Fever, 1914.—Attacks in Weeks according to Date of Rash.

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Jan. 10	88	April 11	82	July 11	70	Oct. 10	133
,, 17	112	,, 18	75	,, 18	88	,, 17	144
,, 24	114	,, 25	85	,, 25	85	,, 24	127
,, 31	107	May 2	76	Aug. 1	75	,, 31	87
Feb. 7	90	,, 9	103	,, 8	76	Nov. 7	107
,, 14	95	,, 16	76	,, 15	73	,, 14	80
,, 21	112	,, 23	84	,, 22	81	,, 21	73
,, 28	90	,, 30	86	,, 29	101	,, 28	74
March 7	93	June 6	69	Sept. 5	102	Dec. 5	69
,, 14	77	,, 13	81	,, 12	121	,, 12	65
,, 21	83	,, 20	83	,, 19	85	,, 19	75
,, 28	85	,, 27	104	,, 26	147	,, 26	64
April 4	91	July 4	77	Oct. 3	137	Jan. 3	55
Total...	1237	Total...	1081	Total...	1241	Total...	1153

City Total, 4,712.

During 1914 the rate of attack from Scarlet Fever was higher than in the towns used for comparison, and was highest in North Manchester.

TABLE 2.—SCARLET FEVER ATTACKS, 1914.—RATES PER 1,000 LIVING, AS COMPARED WITH THE MEAN FOR FIVE YEARS.

	1909	1910	1911	1912	1913	Mean	1914
Twelve Towns *	4·16	3·83	3·43	2·75	3·47	**3·53**	4·86
City of Manchester †	6·15	3·46	2·91	2·74	5·40	**4·13**	6·89
Manchester Township	4·13	1·95	1·72	2·74	4·30	**2·97**	5·05
North Manchester	6·43	3·90	2·90	3·38	8·64	**5·05**	7·46
South Manchester †	6·71	3·74	3·31	2·38	3·89	**4·01**	7·13

* These are Blackburn, Bolton, Bradford, Burnley, Halifax, Hull, Leeds, Liverpool, Oldham, Preston, Salford, and Sheffield.

† Exclusive of Withington.

In the Annual Report for the year 1908 attention was drawn to the cyclic waves of incidence of Scarlet Fever, and two such waves were then noted, viz., from 1891 to 1898, and from 1898 to 1905.

Since then another wave has been completed, viz., from 1905 to 1912, having for its crest 1909, and 1912 as the bottom of the last trough.

Following the rule of the previous waves, there has been a sharp rise in 1913, continued in 1914. A similar rise occurred in 1899, and again in 1900.

ATTACKS PER 10,000 OF THE POPULATION IN 1914 AND 23 PREVIOUS YEARS.

Year ...	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
	48	50	58	43	39	44	33	16	27	46	49

Year ...	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
	42	36	37	34	52	43	44	62	35	29	27	54	69

The following figures show the distribution of the attacks and the proportion treated in Hospital. All the districts of the City are seen to have been fairly uniformly visited in 1914, but the attack rates were highest in Gorton, Newton Heath, Cheetham, Bradford, West Gorton, and Openshaw. As the year advanced it was noticed, from the weekly returns, that the increased prevalence of the disease passed from the Northern to the Southern Districts, where in the last quarter of the year the adjoining districts of Rusholme, Chorlton-upon-Medlock, Hulme, and Withington have a high attack rate.

TABLE 3.—1914—SCARLET FEVER ATTACKS IN DISTRICTS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

	Districts	Attacks	Attack Rate per 1,000 Living	† Case Fatality per cent.	Removals to Hospital per cent.
Manchester Township	Ancoats	201	5·05	4·5	51·7
	Central	99	4·80	3·0	74·8
	St. George's	258	5·15	2·7	55·0
North Manchester	Cheetham	399	9·02	2·3	53·4
	Crumpsall	90	8·48	3·3	41·1
	Blackley	69	4·63	2·9	21·7
	Harpurhey	62	3·54	3·2	48·4
	Moston	193	7·24	2·1	31·6
	Newton Heath	401	9·33	3·7	49·1
	Bradford	199	7·77	4·0	58·3
	Beswick	65	5·34	4·6	49·2
	Clayton	83	5·76	1·2	50·6
South Manchester	Ardwick	273	6·89	5·9	54·2
	Openshaw	235	7·33	5·5	50·2
	Gorton (West)	207	7·70	3·9	56·0
	Rusholme & Kirk.	309	7·05	2·3	35·6
	Chorlton-on-Med.	356	6·57	2·3	49·4
	Hulme	399	6·36	3·5	51·9
	Moss Side	163	4·55	...	31·9
	Gorton	508	11·02	2·6	47·4
	Levenshulme	143	6·32	2·1	18·9
	City of Manchester ...	**4,712**	**6·89**	**3·1**	**47·9**

† Corrected; the fatal cases are those actually occurring amongst the cases notified.

The case fatality is lower than the mean for the past ten years.

TABLE 3A.

Year......	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Mean	1914
Case fatality per cent.	4·1	3·5	3·6	3·6	3·6	4·1	3·4	1·8	2·8	2·5	3·3	3·1

Table 4 gives the age distribution of 51,664 cases of Scarlet Fever, and shows the case fatality per cent. at different ages. This is greatest in the first year of life, but declines more or less rapidly to the age group 10–15, after which an attack of Scarlet Fever is attended with increased risk. In 1914 the case fatality was highest in the first year of life.

TABLE 4.

SCARLET FEVER.—NUMBER OF ATTACKS, AND OF DEATHS; ALSO THE CASE FATALITY PER CENT. AT DIFFERENT AGES, FOR THE TWENTY-THREE YEARS 1891–1913, AND FOR 1914.

AGES	1891-1913			1914		
	ATTACKS	DEATHS	CASE FATALITY PER CENT.	ATTACKS	DEATHS	CASE FATALITY PER CENT.
Under one year ...	548	97	17·7	39	5	12·8
1 to 2 years ...	1,719	261	15·2	59	4	6·8
2 to 3 ,, ...	3,458	394	11·4	205	24	11·7
3 to 4 ,, ...	4,722	440	9·3	319	25	7·8
4 to 5 ,, ...	5,394	376	7·0	418	24	5·7
5 to 6 ,, ...	5,715	234	4·1	478	14	2·9
6 to 7 ,, ...	5,172	159	3·1	476	7	1·5
7 to 8 ,, ...	4,465	109	2·4	483	4	0·8
8 to 9 ,, ...	3,619	67	1·9	340	6	1·8
9 to 10 ,, ...	3,035	56	1·8	291	5	1·7
10 to 15 ,, ...	8,589	123	1·4	867	15	1·7
15 to 20 ,, ...	2,599	52	2·0	341	6	1·8
20 to 25 ,, ...	1,167	19	1·6	186	3	1·6
25 to 35 ,, ...	1,096	34	3·1	149	4	2·7
35 to 45 ,, ...	280	10	3·6	51	2	3·9
45 and over ...	86	3	3·5	10	...	...
All Ages	51,664	2434	4·7	4,712	148	3·1

Table 5 shows the death-rates from Scarlet Fever in 1914. These were slightly higher in South Manchester than in North Manchester.

The death-rate for the City was high when compared with that for London, for England and Wales, or for other towns.

The case fatality per cent. of those attacked, however, is below the average for the last 10 years, as is shown in Table 3a.

TABLE 5.—SCARLET FEVER MORTALITY, 1914.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1909	1910	1911	1912	1913	Mean	1914
England and Wales	0·09	0·06	0·05	0·05	0·06	**0·06**	0·08
97 Great Towns	0·11	0·08	0·06	0·06	0·07	**0·08**	0·09
London	0·08	0·04	0·04	0·04	0·04	**0·05**	0·07
Manchester City	0·27†	0·12‡	0·06	0·07	0·13	**0·13**	0·22
Manchester Township	0·25	0·15	0·08	0·13	0·16	**0·15**	0·17
North Manchester	0·28	0·13	0·08	0·09	0·19	**0·15**	0·22
South Manchester	0·28†	0·08‡	0·05	0·04	0·09	**0·15**	0·23
145 Smaller Towns	0·09	0·06	0·06	0·05	0·05	**0·06**	0·07
England and Wales less the 242 Towns	0·06	0·05	0·04	0·04	0·05	**0·05**	0·06

† Exclusive of Moss Side and Withington.

‡ Exclusive of Moss Side, Withington, Gorton, and Levenshulme.

The percentage of cases removed to hospital in each year since 1895 has been as follows :—

TABLE 6.—SCARLET FEVER.

		1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
Manchester Township.	Removal to Hospital, per cent..	82·0	83·5	89·2	85·8	87·2	88·0	88·5	88·8	91·9	88·6
	Death-rate per 1,000	0·37	0·41	0·27	0·11	0·08	0·16	0·24	0·21	0·14	0·17
Entire City.	Removal to Hospital, per cent..	71·3	73·9	79·7	73·1	74·4	80·9	82·3	81·2	83·4	79·8
	Death-rate per 1,000	0·33	0·37	0·23	0·12	0·08	0·19	0·23	0·27	0·17	0·15

		1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Manchester Township.	Removal to Hospital, per cent..	82·3	75·1	74·5	72·7	66·1	79·6	88·0	89·2	71·1	57·4
	Death-rate per 1,000	0·15	0·27	0·20	0·18	0·25	0·15	0·08	0·13	0·16	0·17
Entire City.	Removal to Hospital, per cent..	72·9	66·3	65·0	68·8	58·1	74·5	76·0	77·5	57·7	47·9
	Death-rate per 1,000	0·13	0·19	0·18	0·16	0·27	0·10	0·06	0·07	0·13	0·22

The percentage of removals to hospital was lower than any previous year, owing to the tax put upon the hospital accommodation by the undue prevalence of the disease.

For the same reason undue delay in the removal of cases was frequently caused, in spite of the fact that special efforts were made to have the most urgent cases removed first.

In no instance during 1914 has a milk supply been suspected of spreading Scarlet Fever.

OVERLOOKED CASES.

An overlooked case is taken to mean one that, so far as could be ascertained, was not isolated for at least one week after the onset.

During the year 345 overlooked cases were discovered. Eighty-three occurred in households with no susceptible contacts, with the result that no secondary cases arose, and therefore these are excluded from further consideration. The remaining 262 cases gave rise to 134 secondary cases.

The total number of susceptibles exposed to infection was 579, and of these 134 contracted Scarlet Fever.

As has been pointed out in previous reports, these overlooked cases are a serious hindrance to the effective control of the disease, and difficulty in dealing with them will continue so long as the parents of children suffering from suspicious illnesses delay seeking medical opinion till a more serious case develops in the family, or till desquamation shows itself. During this interval the overlooked case mixes with other children in the neighbourhood, and during play no doubt is brought into close contact with susceptibles—hence the spread of infection, which in many instances is very difficult to trace.

Return and Recovery Cases.

54 cases, or 2·1 per cent., of those discharged from hospital gave rise to 62 secondary cases.

This is a very low rate indeed.

The percentages of discharged patients giving rise to return secondary cases for the previous five years are as follows :—

1909	1910	1911	1912	1913	1914
5·68	4·27	2·23	3·7	3·3	2·1

The intervals which elapsed between the discharge of the infecting cases and the occurrence of the return cases were as follows :—

Days	Weeks			Months		
1–7	1–2	2–3	3–4	1–2	2–3	3 or more
25	17	5	11	3	1	0

Only seven "recovery" cases occurred in 1914, in spite of the large number of cases nursed at home.

Of course in many of the houses where the primary cases were nursed at home, the susceptibles which were to succumb did so before the primary case recovered, and were recorded as subsequent cases.

This also happens frequently in houses where the primary case has been removed to hospital.

DIPHTHERIA AND MEMBRANOUS CROUP.

By Dr. W. Allan Young.

The usual tables for this disease are again given.

The following table shows the number of cases notified each year for the last ten years :—

1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
530	551	499	546	598	498	472	474	650	746

The distribution of the disease throughout the year is shown in the following table, from which we perceive that the disease was most prevalent in the first quarter.

TABLE I.

DIPHTHERIA, MEMB. CROUP, 1914.—ATTACKS IN WEEKS, ACCORDING TO DATE OF ONSET.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Jan. 10	24	April 11	15	July 11	11	Oct. 10	21
,, 17	22	,, 18	9	,, 18	8	,, 17	17
,, 24	27	,, 25	12	,, 25	8	,, 24	26
,, 31	24	May 2	18	Aug. 1	5	,, 31	15
Feb. 7	23	,, 9	24	,, 8	8	Nov. 7	16
,, 14	19	,, 16	13	,, 15	8	,, 14	14
,, 21	20	,, 23	22	,, 22	7	,, 21	15
,, 28	11	,, 30	15	,, 29	10	,, 28	12
March 7	15	June 6	15	Sept. 5	8	Dec. 5	15
,, 14	21	,, 13	7	,, 12	11	,, 12	18
,, 21	16	,, 20	4	,, 19	11	,, 19	13
,, 28	14	,, 27	10	,, 26	12	,, 26	12
April 4	16	July 4	10	Oct. 3	12	Jan. 2	7
Total...	252	Total...	174	Total...	119	Total...	201

City total, 746.

TABLE II.

SHOWS THE ATTACK RATE PER 1,000 LIVING FOR THE YEAR 1914, COMPARED WITH THE MEAN OF FIVE YEARS—DIPHTHERIA AND MEMBRANOUS CROUP.

	1909	1910	1911	1912	1913	Mean	1914
*Twelve Notification Towns ...	1·44	1·20	1·50	1·17	1·43	**1·35**	1·47
City of Manchester †......	0·98	0·74	0·71	0·71	0·94	**0·82**	1·09
Manchester Township.........	0·89	0·83	0·60	0·51	0·73	**0·71**	0·83
North Manchester	0·98	0·73	0·57	0·66	1·06	**0·80**	1·46
South Manchester †............	1·03	0·72	0·82	0·79	0·94	**0·86**	0·96

* These are in Lancashire and Yorkshire. † Exclusive of Withington.

The following table shows that the number of attacks is highest at ages 3 to 4 :—

Table III.

Diphtheria, Memb. Croup, 1914.—Number of Attacks, of Deaths, and Case Fatality at Different Ages, for the Twenty-three Years 1891-1913, and for 1914.

Ages	1891-1913			1914		
	Attacks	Deaths	Case Fatality*	Attacks	Deaths	Case Fatality*
Under one year ...	282	186	65·9	17	11	64·7
1 to 2 years ...	866	454	52·5	16	10	62·5
2 to 3 „ ...	961	381	39·7	79	30	38·0
3 to 4 „ ...	1190	390	32·8	79	14	17·7
4 to 5 „ ...	1178	323	27·4	90	13	14·4
5 to 6 „ ...	1038	260	25·1	106	7	6·6
6 to 7 „ ...	741	141	19·0	89	8	9·0
7 to 8 „ ...	582	92	15·8	49	4	8·2
8 to 9 „ ...	465	73	15·7	57	4	7·0
9 to 10 „ ...	354	47	13·3	25	1	4·0
10 to 15 „ ...	995	64	6·4	58	2	3·4
15 to 20 „ ...	503	27	5·4	27	2	7·4
20 to 25 „ ...	404	12	3·0	25	...	...
25 to 35 „ ...	565	19	3·4	17	...	...
35 to 45 „ ...	224	5	2·2	8	...	...
45 and over ...	102	8	7 9	4	1	25·0
All ages	10450	2482	23·8	746	107	14·3

* The percentages in this column are the actual proportions of fatal cases to the attacks at those ages.

The case fatality at all ages since 1901 has been as follows :—

1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
28·8	29·4	21·9	20·7	22·4	21·1	20·4	21·8	17·9	19·9	16·5	20·0	14·9	14·3

From the following table we see that the apparent incidence of the disease was greatest in the districts of Blackley and Moston, whilst also it visited severely Cheetham, Ardwick, Harpurhey, Openshaw, and Chorlton-upon-Medlock.

TABLE IV.

DIPHTHERIA AND MEMBRANOUS CROUP, 1914.—ATTACKS IN DISTRICTS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

DISTRICTS		ATTACKS	Deaths	ATTACK RATE PER 1000 LIVING	† CASE FATALITY PER CENT.	REMOVALS TO HOSPITAL PER CENT.
Manchester Township	Ancoats	24	8	0·60	33·3	83·3
	Central	18	2	0·87	11·1	83·3
	St. George's	50	10	1·00	20·0	68·0
North Manchester	Cheetham	77	9	1·74	11·7	48·0
	Crumpsall	11	2	1·04	18·2	45·5
	Blackley	45	5	3·02	11·1	46·6
	Harpurhey	26	5	1·48	19·2	53·8
	Moston	68	7	2·55	10·3	47·0
	Newton Heath	27	6	0·63	22·2	62·9
	Bradford	30	8	1·17	26·7	70·0
	Beswick	6	...	0·49	...	33·3
	Clayton	16	5	1·11	31·3	81·2
South Manchester	Ardwick	59	7	1·49	11·9	67·8
	Openshaw	46	8	1·43	17·4	39·1
	Gorton (West)	20	4	0·74	20·0	50·0
	Rusholme & Kirk.	31	1	0·71	3·2	25·8
	Chorlton-on-Med	67	7	1·24	10·4	44·7
	Hulme	39	7	0·62	18·0	69·2
	Moss Side	19	1	0·53	5·3	57·9
	Gorton	56	4	1·21	7·1	33·9
	Levenshulme	11	1	0·49	9·1	27·3
City of Manchester		746	107	1·09	14·3	53·2

† Corrected: the fatal cases are those actually occurring amongst the cases notified.

The figures given below show that in 1914 Manchester had a death-rate from Diphtheria equal to that which prevailed over England generally.

The attack-rate, however, was lower than that for the twelve notification towns selected for comparison.

TABLE V.

DIPHTHERIA, MEMB. CROUP MORTALITY, 1914.—RATE PER 1000 LIVING COMPARED WITH MEAN OF FIVE YEARS.

	1909	1910	1911	1912	1913	Mean	1914
England and Wales	0·14	0·12	0·13	0·11	0·12	0·12	0·15
97 Great Towns	0·15	0·12	0·15	0·13	0·13	0·14	0·16
London	0·13	0·09	0·14	0·10	0·09	0·11	0·16
Manchester City	*0·19	‡0·16	0·12	0·13	0·14	0·15	0·15
Manchester Township	0·19	0·18	0·15	0·17	0·15	0·17	0·20
North Manchester	0·15	0·12	0·07	0·12	0·18	0·13	0·22
South Manchester	*0·21	‡0·18	0·14	0·13	0·12	0·16	0·10
145 Smaller Towns	0·16	0·11	0·12	0·11	0·11	0·12	0·16
England and Wales, less the 242 towns	0·14	0·12	0·11	0·10	0·11	0·12	0·14

* Exclusive of Moss Side and Withington.

‡ Exclusive of Moss Side, Withington, Gorton, and Levenshulme.

With the exception of Moston Lane School, where a "carrier" case was discovered in March of 1915, and where during 1914 several cases occurred in the same class as this girl, no outbreak in connection with schools has occurred during the year.

There have been no cases during 1914 in which the milk supply might have been the means of spreading the disease. Although the incidence of Diphtheria in Manchester continues to rise, the case-fatality rate continues to fall, and this year it is lower than it has ever been before.

ENTERIC FEVER.

By Dr. W. St. C. McClure.

The number of cases of Enteric Fever notified in Manchester and accepted in 1914 was 156. The investigation was carefully carried out, so far as time would permit. Table I. shows that the death-rate was lower than in any previous year.

Table I.

Incidence of and Death-rate from Enteric Fever in Manchester.

Number of notified cases, deaths, and death-rates per 1,000 living from Enteric Fever in each of fifteen successive years.

Year	1900	1901	1902	1903	1904	1905	1906
No. of cases notified	378	359	378	387	325	345	384
No. of deaths	75	75	66	93	66	55	83
Death-rate — Manchester	0·14	0·14	0·12	0·17	0·12	0·09	0·14
Death-rate — England and Wales..	0·17	0·16	0·13	0·10	0·09	0·09	0·09

Year	1907	1908	1909	1910	1911	1912	1913	1914
No. of cases notified and accepted	265	393	369	358	256	242	292	156
No. of deaths	37	75	71	62	46	43	47	34
Death-rate — Manchester	0·06	0·11	0·13	0·09	0·07	0·06	0·06	0·05
Death-rate — England and Wales..	0·07	0·07	0·06	0·05	0·07	0·04	0·04	0·05

The disease was unequally distributed over the Sanitary Districts, the incidence rate being highest in Central, Crumpsall, and Openshaw.

TABLE II.

ENTERIC FEVER, 1914.—NUMBER OF ATTACKS IN DISTRICTS, WITH ATTAC RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

DISTRICTS	ATTACKS	ATTACK RATE PER 1,000 LIVING	DEATHS	† CASE FATALITY PER CENT.	REMOVALS TO HOSPITAL PER CENT.	MEAN ATTACK RATE 1904-191
Ancoats	7	0·18	2	28·6	100·0	7·21
Central	17	0·82	2	11·8	94·1	4·28
St. George's	17	0·34	5	29·4	100·0	7·53
Cheetham	7	0·16	2	28·6	71·4	3·33
Crumpsall	8	0·75	2	25·0	62·5	6·25
Blackley	2	0·13	1	50·0	50·0	4·50
Harpurhey	4	0·23	1	25·0	75·0	4·58
Moston	1	0·04	...	...	100·0	2·59
Newton	10	0·23	2	20·0	80·0	4·80
Bradford	3	0·12	...	...	66·7	6·71
Beswick	4	0·33	...	...	75·0	4·56
Clayton	2	0·14	...	...	100·0	4·72
Ardwick	3	0·08	1	33·3	100·0	4·86
Openshaw	15	0·47	5	33·3	66·7	6·97
Gorton (West)	9	0·33	1	11·1	88·9	7·67
Rusholme and Kirkman.	5	0·11	1	20·0	60·0	1·87
Chorlton-upon-Medlock	16	0·30	5	31·3	81·2	4·11
Hulme	9	0·14	3	33·3	66·7	6·39
Moss Side	6	0·17	...	...	66·7	...
Gorton	7	0·15	1	14·3	85·7	...
Levenshulme	4	0·18	...	...	100·0	...
City of Manchester	**156**	**0·23**	**34**	**21·8**	**81·4**	**5·14**

† Corrected; the fatal cases are those actually occurring amongst the cases notified.

The distribution of the cases according to the age of attack is given in the following table, which shows that the incidence of the disease rises gradually up to the age-period 15–24, when it reaches a maximum. There are, however, a large number attacked at earlier ages.

TABLE III

ENTERIC FEVER.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY PER CENT. AT DIFFERENT AGES, FOR THE TWENTY-THREE YEARS 1891–1913, AND FOR 1914.

AGES	1891-1913			1914		
	ATTACKS	DEATHS	CASE FATALITY PER CENT.	ATTACKS	DEATHS	CASE FATALITY PER CENT.
Under one year ...	17	7	41·2	...	...	...
1 to 2 years ...	52	8	15·4	...	...	...
2 to 3 " ...	109	16	14·7	1	...	...
3 to 4 " ...	155	21	13·5	2	1	50·0
4 to 5 " ...	212	23	10·8	...	...	...
5 to 6 " ...	244	27	11·1	3	...	...
6 to 7 " ...	240	24	10·0	4	...	...
7 to 8 " ...	226	20	8·8	3	...	...
8 to 9 " ...	242	21	8·7	3	...	...
9 to 10 " ...	231	23	10·0	4	...	...
10 to 15 " ...	1362	149	10·9	15	1	6·7
15 to 20 " ...	1476	268	18·2	22	6	27·3
20 to 25 " ...	1456	286	19·6	21	7	33·3
25 to 35 " ...	2063	485	23·5	43	7	16·3
35 to 45 " ...	975	289	29·7	23	7	30·5
45 to 55 " ...	653	227	34·8	7	4	57·1
55 to 65 " ...				5	1	20·0
Over 65 " ...				...	...	...
All ages	9713	1894	19·5	156	34	21·8

Table IV. shows the distribution of the attacks in weeks. It shows that, as usual, the greatest incidence occurred in the first and fourth quarters.

TABLE IV.

ENTERIC FEVER ATTACKS IN WEEKS REPORTED IN 1914, ACCORDING TO DATE OF ONSET.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Jan. 10	3	Apl. 11	6	July 11	2	Oct. 10	...
,, 17	4	,, 18	2	,, 18	2	,, 17	1
,, 24	4	,, 25	2	,, 25	1	,, 24	1
,, 31	7	May 2	5	Aug. 1	1	,, 31	5
Feb. 7	6	,, 9	2	,, 8	1	Nov. 7	4
,, 14	3	,, 16	...	,, 15	...	,, 14	4
,, 21	4	,, 23	1	,, 22	...	,, 21	4
,, 28	1	,, 30	2	,, 29	...	,, 28	1
Mch. 7	3	June 6	1	Sept. 5	3	Dec. 5	6
,, 14	7	,, 13	1	,, 12	2	,, 12	3
,, 21	6	,, 20	3	,, 19	5	,, 19	2
,, 28	5	,, 27	2	,, 26	7	,, 26	5
Apl. 4	3	July 4	1	Oct. 3	5	Jan. 2	7
Total...	56	Total...	28	Total...	29	Total...	43

City Total 156

From the following figures it will be seen that the incidence in 1914 was below that prevailing in the comparison towns.

Table V.

Enteric Fever Attacks, 1914.—Rates per 1,000 living, Compared with Mean of Five Years.

	1909	1910	1911	1912	1913	Mean	1914
Twelve Notification Towns ...	0·42	0·33	0·47	0·30	0·24	**0·35**	0·28
City of Manchester *	0·61	0·53	0·38	0·36	0·42	**0·46**	0·23
Manchester Township	0·90	0·84	0·59	0·32	0·62	**0·65**	0·37
North Manchester...............	0·47	0·39	0·31	0·28	0·38	**0·37**	0·20
South Manchester*	0·58	0·51	0·36	0·42	0·39	**0·45**	0·20

* Excluding Withington.

From the next table we see that Manchester compares well with the country generally in the reduction of Enteric Fever during the present year.

Table VI.

Enteric Fever Mortality, 1914.—Rate per 1,000 living, Compared with Mean of Five Years.

	1909	1910	1911	1912	1913	Mean	1914
England and Wales	0·06	0·05	0·07	0·04	0·04	**0·05**	0·05
London	0·03	0·04	0·03	0·03	0·02	**0·03**	0·03
Dublin	0·17	0·10	0·20	0·11	0·09	**0·13**	0·15
City of Manchester	†0·15	‡0·09	0·07	0·06	0·06	**0·09**	0·05
Manchester Township	0·22	0·14	0·15	0·04	0·05	**0·12**	0·09
North Manchester...............	0·11	0·05	0·05	0·08	0·06	**0·07**	0·03
South Manchester...............	†0·14	‡0·09	0·06	0·06	0·07	**0·08**	0·05

† Exclusive of Moss Side and Withington.

‡ Exclusive of Moss Side, Withington, Gorton, and Levenshulme.

Distribution of the Disease.

156 cases of Enteric Fever were registered during the year. So few cases in any one year have never previously been recorded, the nearest approach to this figure being 242 in 1912.

In order to show the distribution of the disease in the various districts of Manchester during the past 15 years, the following table has been prepared which gives the mean attack rates for each district during the three quinquennial periods 1900–1904, 1905–1909, 1910–1914, the rates being based on the populations in 1902, 1907, and 1912 respectively :—

	1900-04	1905-09	1910-14	1914
Ancoats	·71	·91	·49	·18
Central	·66	·59	·47	·82
St. George's	·78	·57	·64	·34
Cheetham	·49	·56	·24	·16
Crumpsall	·62	·87	·54	·75
Blackley	·48	1·10	·22	·13
Harpurhey	·87	·74	·32	·23
Moston	·33	·22	·21	·04
Newton	·71	·62	·29	·23
Bradford	·92	·77	·45	·12
Beswick	·99	·65	·30	·33
Clayton	1·08	·74	·37	·14
Ardwick	·64	·50	·50	·08
Openshaw	·83	·83	·64	·47
Gorton (W.)	·95	·97	·49	·33
Rusholme	·44	·46	·12	·11
Chorlton-upon-Medlock	·36	·50	·36	·30
Hulme	·57	·69	·46	·14
Moss Side	..	·34	·16	·17
Gorton..	..	..	·37	·15
Levenshulme	..	..	..	..

Great variation of incidence from year to year is noticed in each district, but, on the whole, it will be seen that the attack-rates have steadily decreased.

When the figures for 1914 are compared with the means for the three periods it is noted that, except in two districts, Central and Crumpsall, this decrease has been continued. The high figure in the Central district is accounted for by 7 cases which occurred at the Military Hospital. These 7 were the only cases which arose in connection with His Majesty's troops in Manchester, and most of them were infected outside the district. The attack-rate of ·75 in Crumpsall represents 8 cases, amongst these being 5 in the Workhouse Infirmary.

ASCERTAINED CAUSES OF INFECTION.

No particular outbreak due to water, milk, ice cream, or other common infected source occurred.

Of the 156 cases 24, or 15 per cent., were traced to direct infection, 13 were infected outside Manchester, and 25 cases giving a positive Widal reaction were associated with the consumption of mussels at a time previous to the onset of illness compatible with infection being derived therefrom.

So that the records of previous years may be continued, the following tables are inserted here :—

	Males at Ages						Females at Ages						Total
	0-4	5-14	15-24	25-44	45-64	65+	0-4	5-14	15-24	25-44	45-64	65+	
Mussel Cases ..	..	3	8	6	..	..	..	1	2	5	..	..	25
Other Cases ..	1	15	21	30	8	..	2	13	11	25	4	..	130
													155

Mussel Cases.

	MUSSELS			CASES	
	Taken alone	With others	Not stated	Male	Female
Raw	5	9	..	10	4
Steamed	7	4	..	7	4
Total	12	13	..	17	8

There remain, therefore, 92 cases, or 58 per cent. of the total, in which the source of infection was not determined. This proportion of cases of unknown origin is rather less than in previous years. No evidence was obtained pointing to watercress, chip potatoes, or other edibles as being the infected source.

MILK-BORNE OUTBREAK OF TYPHOID FEVER.

During the present year 1915 a group of cases of Typhoid Fever in Manchester, and in a district outside but adjoining the City, were supplied with milk from one or other of two dealers who may be designated A and B. Both A and B obtained their milk from a third dealer, C, and the facts brought to light by the investigation which followed pointed to C's milk as the source of infection.

On April 6th, 10 cases of Typhoid were known to have occurred in connection with these milk supplies, 4 in Manchester and 6 elsewhere.

Of the 10 cases, 4 obtained their milk from A and 6 from B. All 4 Manchester cases, which occurred in children aged 15, 9, 7, and 5 years respectively, had their milk from B. Milk dealer A keeps no cows of his own, but daily fetches his milk from C and distributes it amongst 20 or 30 customers, none of which live in Manchester. No history of illness could be obtained from this family, and specimens of blood all gave a negative Widal reaction.

Milk dealer B obtains from his own cows about 8 dozen quarts of milk, but half-way on his daily round he fetches about 2½ dozen quarts from C, and mixes it with what is left of his own. Neither B, his family, nor employees gave any history of illness, and specimens of blood from each gave a negative Widal reaction.

Milk dealer C supplies A and B with milk every day. He supplies no one else. C has two employees, C1 and C2. C1 gave a history of an influenzal attack during the month of March, when he was off work for three weeks without medical attendance. C himself and C2 gave no history of illness. Specimens of blood from each were taken, and those from C and C1 gave a positive Widal reaction. It was therefore thought necessary to pursue the matter further, and on April 8th C1 was removed to Monsall Hospital and kept under observation, while specimens of excreta from each were taken on April 11th, and submitted to Professor Delépine to be examined for the presence of Typhoid bacilli. Repeated examinations in the case of C1 gave negative results. On the other hand, examination of specimens from C showed the presence of Typhoid bacilli. In consequence, C was looked upon as a carrier, and steps were taken to prevent the spread of infection from this source.

No further cases occurred in Manchester in connection with these milk supplies.

At this point it is convenient to give a summary of the work done for the Public Health Department by the Public Health Laboratory.

BACTERIOLOGICAL EXAMINATIONS MADE FOR THE COUNTY BOROUGH OF MANCHESTER DURING THE YEAR 1914, PUBLIC HEALTH LABORATORY, UNIVERSITY OF MANCHESTER.

Month	Diphtheria			Typhoid			Tuberculosis						Other Investigations
							Sputum			Milk			
	+	—	Total	+	—	Total	+	—	Total	+	—	Total	
January	50	157	207	19	53	72	90	220	310	5	58	63	L.B. 6,448, cerebro spinal fluid; L.B. 6,458; W.B. 1,280; L.B. 6,482, 6,502, 6,503, 6,504, 6,511, 6,512; mussels (6), 6,490; W.B. 1,289; W.C.B. 761; L.B. 6,492; W.B. 1,290; L.B. 6,493; celery for B. coli.
February ..	53	179	232	14	41	55	77	198	275	10	49	59	L.B. 6,627; mussels, 6,537, 6,551; cerebro spinal fluid, 6,557, 6,587; W.B. 1,328-33, 1,338; W.C.B. 812-818.
March	24	129	153	16	41	57	77	215	292	9	55	64	L.B. 6,637, 6,648, 6,665; W.B. 1,376, 1,379-84; L.B. 6,677, swab from tuberc. ulcer.
April	33	81	114	12	34	46	84	202	286	9	47	56	L.B. 6,688, swab from tuberc. ulcer; 6,695, urine and fæces; 6,724, fæces for typhoid.
May	38	178	216	8	23	31	128	295	423	16	66	82	L.B. 6,853, cerebro spinal fluid; 6,858, kidney, spleen, liver, gall bladder, and mesenteric gland.
June	11	108	119	4	20	24	59	196	255	6	46	52	L.B. 6,887, 6,902 (two tins salmon); 6,904, blood and fæces; 6,906, blood, urine, and fæces; W.B. 1,444-5; W.C.B. 923.
July	19	114	133	4	23	27	89	175	264	2	12	14	L.B. 6,918, pus from cyst on cheek.
August	9	85	94	2	21	23	82	174	256	2	16	18	L.B. 7,059, nodules from cavity in lung.
September ..	22	57	79	5	18	23	76	143	219	3	45	48	L.B. 7,071, cerebro spinal fluid, 7,097; W.B. 1,532, bact. and examin. of sediment.
October ..	49	112	161	12	28	40	115	224	339	3	29	32	L.B. 7,103; W.B. 1,535 and examin. of sediment.
November ..	28	93	121	8	21	29	67	160	227	2	4	6	L.B. 7,197, 7,199, fæces for B. typhosus.
December ..	24	61	85	5	28	33	63	112	175	2	4	6	L.B. 7,215, 7,237, urine for B. typhosus.
Total ..	360	1,354	1,714	109	351	460	1,007	2,314	3,321	69	431	500	68

MEASLES.

The number of deaths from Measles in 1914 was decidedly below the average, as it was also in 1913. How far this was due to the carrying out of the Manchester Clauses relating to Measles and Whooping Cough, is open to doubt. These clauses enable some measure of control to be exercised over the spread of Measles in families in which one of the members attends an Elementary School; and, provided that the Sanitary Inspectors and the school visitors were able to administer the Local Act thoroughly, no doubt more improvement could be effected. It is, however, precisely when the disease increases that the administration required becomes more difficult, owing to inability on the part of the Staff to overtake the work. The mortality, moreover, does not depend entirely on the extent to which the disease has spread, but is also determined by the conveniences existing in the homes for proper treatment, and on the care taken of children who have been attacked.

The following table provides a comparison of the mortality from Measles in 1914 and in other years since 1893, and also a comparison of the number of deaths year by year from Measles and other diseases :—

TABLE I.

No. of Deaths from	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Measles	293	222	505	567	628	271	699	254	292	242	345
Scarlet Fever......	140	116	173	198	124	65	46	105	127	146	97
Diphtheria	122	102	72	54	29	41	71	76	133	123	136
Enteric Fever......	127	91	95	118	95	120	73	75	75	66	93
Smallpox	49	21	2	0	0	0	0	0	0	0	24
Whooping Cough	240	286	250	359	299	170	227	371	224	242	213
Diarrhœa, &c. .	956	375	904	572	964	1090	1121	822	1019	296	507
Phthisis	1060	1026	1139	1078	1139	1056	1117	1135	1144	1145	1025

No. of Deaths ...	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Measles	425	231	475	229	366	396	291	337	490	259	293
Scarlet Fever	85	78	108	102	92	164	74	45	51	94	160
Diphtheria	99	127	119	106	123	113	101	88	97	105	111
Enteric Fever......	66	55	83	37	75	88	61	51	47	48	38
Smallpox	9	0	0	0	0	0	0	0	1	0	0
Whooping Cough	280	195	193	314	220	129	397	140	298	139	283
Diarrhœa, &c. ...	761	729	981	291	591	268	351	1149	272	622	524
Phthisis	1106	988	1089	1092	1088	1115	1070	1116	1107	1056	1257

In appraising these figures it is necessary to remember that considerable accessions of population occurred in 1904 and 1909, while the total population has been steadily increasing. Taking this into account, and having regard also to the decline in the birth-rate and to the decline in infant mortality, we may compare the number of deaths in successive quinquennia. These were, in 1895–1899, 2,670; in 1900–1904, 1,558; in 1905–1909, 1,697; in 1910–1914, 1,670. The first period showed by far the heaviest mortality, though this excess was not confined to Manchester.

No change occurred from the period 1900–1904 to the period 1905–1909. Having regard, however, to the increase in population, a distinct, though not a very great, improvement is shown in the period 1910–1914.

It is not certain, however, that this improvement is to be associated with any diminution in prevalence of the disease. The mortality from Measles is very dependent on social conditions, and fluctuates, therefore, according as it prevails among the poorer or better off classes, and its distribution changes from one period to another.

The next table shows the distribution of deaths from Measles according to ages, the mortality reaching its maximum in the second year of life and declining rapidly after the third year :—

TABLE 2.

DEATHS FROM MEASLES IN THE CITY OF MANCHESTER.

	Under One Year			Years of Age				Total 5 Years and upwards
Years	Under 3 Months	3-5 Months	6-11 Months	-1	-2	-3	-4	
1899–1908	16	57	742	1470	599	338	168	168
1909	2	6	78	164	58	37	16	35
1910	2	2	76	118	39	21	15	18
1911	1	7	73	152	47	30	16	11
1912	4	8	99	163	88	58	38	32
1913	5	3	62	98	37	20	19	15
1914	1	3	62	127	54	19	9	18

The next table shows the distribution of the deaths in quarters of the year. As a rule the highest number of deaths occurs in the second quarter. Where this is not the case, mortality is highest in the first quarter.

Over England and Wales generally mortality from Measles attains two maxima, in June and December. This does not agree entirely with the Manchester experience :—

TABLE 3.

YEAR	1st Quarter	2nd	3rd	4th
1902	67	68	60	47
1903	158	104	54	29
1904	100	189	83	53
1905	41	99	77	13
1906	60	266	118	32
1907	51	73	50	55
1908	116	78	71	101
1909	155	164	45	32
1910	32	118	71	70
1911	48	197	61	31
1912	214	211	28	37
1913	85	105	58	11
1914	37	132	50	74

When the death-rate from Measles for Manchester is compared with that for England and Wales it is seen in successive years to be considerably higher, and to be higher as a rule than the death-rate for the 97 great towns. This may be considered to imply that the social conditions and customs of Manchester are less favourable than those of the great towns taken in the aggregate. Seasonal factors having a general influence may be at work, since the death-rate in Manchester closely follows that of the country generally :—

TABLE 4.—1914.—MEASLES MORTALITY.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1909	1910	1911	1912	1913	Mean	1914
England and Wales	0·35	0·23	0·36	0·35	0·28	**0·31**	0·24
97 Great Towns	0·48	0·31	0·47	0·47	0·34	**0·41**	0·35
London	0·48	0·41	0·57	0·40	0·34	**0·44**	0·31
City of Manchester	0·67	0·40‡	0·47	0·68	0·35	**0·51**	0·40
Manchester Township	0·93	0·62	1·05	0·85	0·61	**0·81**	0·69
North Manchester	0·46	0·32	0·46	0·59	0·27	**0·42**	0·44
South Manchester	0·72	0·49‡	0·31	0·67	0·32	**0·50**	0·30
145 Smaller Towns	0·33	0·16	0·41	0·35	0·30	**0·31**	0·21
England and Wales (less the 242 Towns)	0·21	0·15	0·22	0·20	0·20	**0·20**	0·12

‡ Exclusive of Moss Side, Gorton, Withington, and Levenshulme.

The incidence of mortality shifts from one district to another year by year.

In 1914 the highest mortality rate experienced was in the Bradford district, which was also one of the three most severely visited in 1913. On the other hand the district of St. George's underwent the highest death-rate of all, while in 1913 the mortality rate was comparatively low. In 1913, however, the highest death-rate occurred in the district of St. George's.

The manner in which the disease was distributed is shown in the following table, which shows that the severest incidence of mortality was on the districts of Bradford and Ancoats :—

TABLE 5.—1914.—DEATHS AND DEATH-RATES FROM MEASLES IN THE VARIOUS DIVISIONS OF THE CITY.

	Statistical Divisions	Estimated Population	Deaths	Death-rate	Average Death-rate 1904-1913
	City of Manchester	**739,136**	**293**	**0·40**	**0·53**
I.	Manchester Township ...	110,603	76	0·69	0·79
II.	North Manchester.........	209,114	93	0·44	0·44
III.	South Manchester.........	419,419	124	0·30	0·49
I.	Ancoats	39,831	38	0·95	0·89
	Central	20,633	11	0·53	0·62
	St. George's	50,139	27	0·54	0·79
II.	Cheetham	44,218	8	0·18	0·23
	Crumpsall	10,608	7	0·66	0·42
	Blackley....................	14,914	6	0·40	0·31
	Harpurhey	17,531	5	0·29	0·52
	Moston	26,664	6	0·23	0·31
	Newton Heath	42,988	21	0·49	0·48
	Bradford	25,617	28	1·09	0·78
	Beswick	12,174	8	0·66	0·79
	Clayton	14,400	4	0·28	0·31
III.	Ardwick	39,621	15	0·38	0·56
	Openshaw	32 064	13	0·41	0·75
	Gorton (West)	26,884	17	0·63	0·64
	Rusholme and Kirk.......	43,833	3	0·07	0·18
	Chorlton-upon-Medlock..	54,192	20	0·37	0·41
	Hulme	62,698	30	0·48	0·88
	Moss Side	35,823	5	0·14	0·13
	Withington	55,572	6	0·11	0·10
	Gorton	46,095	15	0·33	0·45
	Levenshulme...............	22,637	...	...	0·19

It appears desirable, in view of the circular issued by the Local Government Board, to give some account of the policy pursued in this district, and to show wherein failure is liable to occur, and some observations follow the section on Whooping Cough.

WHOOPING COUGH.

As with Measles, the death-rate from Whooping Cough is heaviest in the central parts of the City. The death-rate over the City is nearly always higher than that of the country generally, or of the 97 great towns.

General conditions do not exercise the same influence as in Measles, since there is little change in the death-rate from Whooping Cough year by year over England and Wales, whereas the fluctuations of the death-rate in Manchester are very great.

TABLE 1.

1914.—WHOOPING COUGH MORTALITY.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1909	1910	1911	1912	1913	Mean	1914
England and Wales	0·20	0·24	0·21	0·23	0·14	**0·20**	0·21
97 Great Towns............	0·24	0·29	0·24	0·26	0·17	**0·24**	0·25
London	0·26	0·28	0·23	0·22	0·17	**0·23**	0·20
City of Manchester ...	0·21	0·61‡	0·20	0·41	0·19	**0·32**	0·38
Manchester Township ...	0·15	0·88	0·33	0·55	0·19	**0·42**	0·61
North Manchester.........	0·15	0·47	0·18	0·36	0·19	**0·27**	0·33
South Manchester	0·28	0·59‡	0·16	0·40	0·18	**0·32**	0·35
145 Smaller Towns	0·17	0·24	0·18	0·24	0·13	**0·19**	0·18
England and Wales (less the 242 Towns).........	0·16	0·17	0·19	0·17	0·12	**0·16**	0·17

‡ Exclusive of Moss Side, Withington, Gorton, and Levenshulme.

The distribution of the mortality rates over the City is shown in Table 2 for the year 1914, and for the 10 years 1904–13. It will be seen from this table that though the association with social conditions holds over large areas, it does not appear clearly when smaller districts are considered.

Thus the death-rates in Hulme and Bradford are as high as those in Ancoats, while Ardwick, Openshaw, and Newton Heath come very near to the same point.

The following table shows the death-rates for each of the Sanitary Divisions and Districts. It will be seen that Ancoats and Ardwick have the highest death-rates, but that the mortality is widely distributed.

TABLE 2.—1914.—DEATHS AND DEATH-RATES FROM WHOOPING COUGH IN THE VARIOUS DIVISIONS OF THE CITY.

Statistical Divisions		Estimated Population	Deaths	Death-rates	Average Death-rates, 1904-1913.
	City of Manchester	**739,136**	**283**	**0·38**	**0·35**
I.	Manchester Township	110,603	68	0·61	0·43
II.	North Manchester	209,114	68	0·33	0·31
III.	South Manchester	419,419	147	0·35	0·34
I.	Ancoats	39,831	31	0·78	0·48
	Central	20,633	10	0·48	0·34
	St. George's	50,139	27	0·54	0·42
II.	Cheetham	44,218	13	0·29	0·17
	Crumpsall	10,608	1	0·09	0·24
	Blackley	14,914	8	0·54	0·19
	Harpurhey	17,531	2	0·11	0·34
	Moston	26,664	3	0·11	0·27
	Newton Heath	42,988	15	0·35	0·44
	Bradford	25,617	11	0·43	0·48
	Beswick	12,174	4	0·33	0·27
	Clayton	14,400	11	0·76	0·28
III.	Ardwick	39,621	28	0·71	0·45
	Openshaw	32,064	16	0·50	0·45
	Gorton (West)	26,884	12	0·45	0·42
	Rusholme and Kirk.	43,833	5	0·11	0·23
	Chorlton-upon-Medlock	54,192	18	0·33	0·30
	Hulme	62,698	37	0·59	0·49
	Moss Side	35,823	3	0·08	0·16
	Withington	55,572	9	0·16	0·12
	Gorton	46,095	17	0·37	0·33
	Levenshulme	22,637	2	0·09	0.24

THE ACTION TAKEN IN REGARD TO MEASLES AND WHOOPING COUGH IN MANCHESTER.

In a circular dated March 31st, 1915, the Local Government Board state that they are willing to comply with an application from any Sanitary Authority for an order making the notification of the first cases of Measles, Whooping Cough, or German Measles occurring in a household applicable to their district.

They also propose to include in the order a clause empowering the Sanitary Authority to provide or contract for the provision of medical and nursing assistance for the poorer classes of the district who are suffering from any of these diseases.

In their Local Act for 1911, the Manchester Corporation obtained powers whereby a parent or guardian, having personal charge of a child in attendance at a school, who is aware of or has reason to suspect the occurrence of any of these diseases in any member of the family, must forthwith notify the occurrence to the head teacher of the school under a penalty not exceeding ten shillings.

The powers sought were granted for a period not exceeding five years, but in 1913 this limitation was removed.

It was considered that in this way some control would be exercised over these diseases, as practically all cases would come under review.

The manner in which notification is administered is as follows :—

> These clauses came into force on January 1st, 1912, and on January 22nd, 1912, reprints of the section and forms for notification were distributed to every child attending an Elementary School. A circular of advice is issued which contains a form of notification.
>
> A copy of the notifications received at the school is handed to the School Attendance Officer. The School Attendance Officer then calls at the houses to verify the notifications received, after which he sends the list to the Public Health Office. At his visit he leaves a leaflet of instructions which is also used as a School Exclusion Form. He also serves a School Exclusion Form at the school.
>
> On receipt of the list from the School Attendance Officer at the Public Health Office a report form is filled in for each case by the Chief Clerk, which is handed to the Inspector of Nuisances for the district in which the case occurs. The Inspector, forthwith, visits the house, investigates the case, fills up the above report form, instructs the parents as to precautions to be adopted, and takes steps to remedy insanitary conditions.

These reports are then handed in to the Chief Clerk, and by him transmitted to the Medical Officer of Health.

It is rare that a report is received of a breach of the clauses otherwise than in respect of delay. If such breach does occur a letter is addressed to the parents.

The number of cases reported visited and dealt with was in 1913, 4,463; and in 1914, 6,220.

It will be seen that there is considerable room for delay before the houses are visited. This arises first in regard to the receipt of notification by the Medical Officer from the schools, and also from failure of the District Inspector of Nuisances to visit forthwith, and, although every effort has been made to shorten the period between notification and the report of the Inspector, yet delay does occur in many cases sufficient to prevent a visit being made before other cases have occurred.

This is specially liable to occur when there is considerable prevalence of Measles or Whooping Cough.

In any case it is difficult to avoid such delay in the case of Whooping Cough as will allow fresh cases to be infected from lack of instruction.

There is, moreover, the interruption of school holidays.

Nevertheless, there can be no doubt that under the system here touched upon improvement has resulted. At the present time there is shortage of Sanitary Inspectors, and the work of those who remain suffers in consequence.

No nursing assistance has been arranged for, and it would be desirable that no doubt should exist as to the power of Local Authorities to obtain such assistance.

To some extent the shortage of District Inspectors of Nuisances could be made up by the appointment of Lady Inspectors of Nuisances, dealing with these cases more particularly. If such Inspectors were also trained nurses the proposal of the Local Government Board would be more fully accomplished.

Insufficient care of children suffering from these diseases also arises from poverty, and, though judicious advice would aid in securing better conditions, it is probable that further assistance is needed.

1914.

MEASLES AND WHOOPING COUGH.

MONTH	No. of cases notified. Measles	No. of cases notified. Whooping Cough
†January	140	358
February	274	150
March	433	286
†April	790	435
May	1,059	344
†June	551	132
†July	311	57
†August	51	43
*September	2	9
October	218	21
November	286	14
†December	239	17
Totals	4,354	1,866

* School Attendance Officers commenced assisting with the Relief Work.

† Holidays occurred in these months.

EPIDEMIC SUMMER DIARRHŒA.

The prevention of Summer Diarrhœa is undoubtedly more important than its treatment by the Public Health Authority, since it would be quite impossible to treat more than a small part of the cases.

But, although this is the case, it is advisable that treatment should be accorded even to a small number of cases, if for no other reason, so that a knowledge may be obtained of the best lines of treatment, and as to how much may be effected by treatment in the saving of life.

The prevention of epidemic Diarrhœa, in the light of existing knowledge, must be pursued on various lines.

In the first place, instruction is given by the staff of Health Visitors in the elementary principles of feeding, and in the care of infants generally.

For this, special training and instructed experience in the Health Visitor are requisite, so that the Health Visitors appointed by the Sanitary Committee are required, in general, to have a certificate of three years' general training as a nurse.

It is no doubt true that healthy infants with sound digestions are not exempt from Diarrhœa, but they are less likely to be infected than infants whose digestions are impaired, and a fatal issue is less likely.

The Health Visitors are instructed to be careful that their advice does not clash with that of the medical attendant.

Particular attention is given by the Health Visitors to the cleanliness of the home, and to the manner in which food is stored.

It is now generally accepted that the housefly is an active agent in the propagation of disease, and more especially of Diarrhœa.

This agency, however, only becomes important when flies are present in very large numbers, and it is, therefore, necessary to diminish their numbers by every possible means.

The housefly breeds in collections of vegetable refuse, and in manure, both human and animal.

Even under the most favourable conditions the period elapsing between the laying of eggs and their maturing into the complete fly is not less than a week.

It would, therefore, suffice to arrest the propagation of flies if all such collections were removed at least once a week.

But it is necessary to add that the removal must be complete, and must be to a distance from habitations.

The most important material is horse manure, since this ferments after it is deposited, so that, in general, all the requisites for rapid and complete production of the housefly are present, viz., warmth, moisture, and dry places in which the last stage may be completed.

In other materials development probably occurs much more slowly, and is probably restricted to a shorter number of weeks.

Removal must be complete. Hence a brick manurestead, with chinks in which the pupæ can lodge, is not a suitable receptacle for horse manure.

Nor is a cart a suitable receptacle, unless the wheels and the ground beneath the cart are kept clean. Probably a stout wire basket is the best receptacle for light manure, but presents no advantages if the manure is straw, is heavy, and is not permeable by the atmosphere. If, however, removal is complete, other considerations do not enter.

Removal must be to some place in the country, since, if manure is removed only from one part of the City to another, removal of the manure within a week is compatible with the production of a swarm of flies, though in a different situation from that in which the eggs are laid.

It is probable that Diarrhœa is generally introduced by the infant's food, though it may well be conveyed direct from one child to another by flies.

In either case a very large number of flies will be required to carry sufficient infection from one child to another, and the propagation of the disease becomes a question of the numbers of the housefly.

It is, therefore, important to destroy as many flies as possible.

The Sanitary Committee have, therefore, given instructions that the following handbills shall be distributed as widely as possible :—

CITY OF MANCHESTER.

The Housefly.

There is strong evidence that houseflies carry infections, especially the infections of Diarrhœa, Enteric Fever, and excretal diseases generally, possibly also of Tuberculosis, Diphtheria, and other diseases.

There are two kinds of houseflies common in Manchester : the smaller and the larger housefly.

The smaller housefly does not need so high a temperature to develop from the egg to the complete insect as does the larger housefly, and is common at an earlier period of the year. The larger housefly under favourable conditions can complete its cycle in about a week.

The most favourable conditions are found in fermenting collections of horse manure, which supply warmth and moisture, both of which are necessary.

In warm weather, however, other decaying matters afford the necessary materials for development, such as decaying vegetables, collections of tea leaves, etc., etc.

The housefly requires moisture. This it obtains from the mouth and nose of young children, from perspiration, and from any deposit which may take place on cooled surfaces, from liquids such as tea, syrup, and milk, and finally from excreta.

It is also fond of substances containing sugars, such as the crust and crumb of bread, sugar, syrup, fruit, and meat, on which it deposits infectious matter which it has picked up.

It may carry infection from one person to another directly, or indirectly through food. But only some out of many flies carry infection, and it requires very large numbers before disease is thus conveyed.

It is thus of the greatest importance to prevent the numbers from becoming large.

This object is attained in various ways.

The best way is to prevent flies from multiplying.

This would be done if no collections of moist refuse were left exposed in which the flies could lay their eggs or in which the eggs could develop.

Householders should, therefore, only put dry materials into their ashbins, which should then be kept covered over so as to exclude both rain and flies.

All vegetable matters should be burned in the kitchen fire.

They should make sure that the contents are removed once a week.

But the most important thing is to secure the absence of moisture, since flies do not develop in absolutely dry materials.

It is also important to avoid attracting flies to the house.

For that purpose no crumbs, crusts, sugar, syrup, excreta, or liquid matters must be left uncovered, and trouble must be taken always to keep the house neat and clean. Flies are specially attracted to the kitchen, because there they get warmth, moisture, and bits of food. Hence the greatest trouble should be taken to keep the kitchen clean.

In order to keep them from infants a very light veil should be put over the face.

Every means should be taken to destroy as many flies as possible.

This purpose may be served by suspending papers, and for those who can afford it by the use of traps.

Traps of wire may be purchased at ironmongers, which, however, need to be baited with sweet beer or sugar moistened with such beer. They should be placed in an oven to kill the flies every 24 hours, and then emptied.

Sweetened water with formalin in the proportion of two teaspoonfuls to a pint of water placed in a saucer or soup plate also kills flies.

In these ways large numbers of flies may be killed.

But flies are chiefly generated in horse manure, in which they find moisture, sustenance, and warmth. If all horse manure were removed completely within a week to some place outside the City, the plague of flies would, in the main, cease.

Those who keep horse manure for longer periods not only break the law, but injure their neighbours.

It is, however, not only necessary that horse manure should be removed within a week, but the receptacles must be so constructed that no matter can lodge in crevices, as these will serve as breeding grounds. If manure is placed on the ground, this will serve for the growth of larvæ.

They must also be emptied at periods not exceeding a week, the manure being at once removed entirely outside the City.

Greengrocers must store their refuse in closed vessels properly covered, and must attend to their periodical removal.

This applies also to all other trade refuse of a vegetable character.

It is possible that blue-bottle flies are to some extent a source of danger, and the same precautions must therefore be observed as regards the refuse produced by tripe boilers, fishmongers, pork butchers, bone boilers, etc., and, in fact, by all persons dealing in animal products.

Householders must, for this reason, burn all animal refuse, which should not be placed in the receptacle for house refuse, nor be thrown away.

By Order,

JAMES NIVEN,

Medical Officer of Health.

Public Health Office,
Civic Buildings,
1, Mount Street, Manchester,
June 9th, 1915.

Supplementary handbills are, in addition, sent out in special cases. They run as follows :—

THE HOUSEFLY.

To Greengrocers, Fruiterers, Florists, Market Gardeners, Tenants of Small Holdings, etc.

The multiplication of the housefly in summer is a source of serious danger to the community, as it is a carrier of infections, such as those of Diarrhœa, Typhoid Fever, and Cholera.

The refuse from the above occupations is a favourable soil on which houseflies can lay their eggs, and is also suitable for the development from the egg to the fly.

Any scatterings of such materials or collections not properly protected, especially if kept for more than two or three days, must be avoided.

All refuse of the above nature, as well as any waste straw used in packing, must be at once put into a galvanised bin with a close-fitting lid, and the contents must be removed at intervals not exceeding two or three days.

It is necessary for the public welfare that vegetable refuse should not be allowed to lie about on the premises, which should be kept clean.

By Order,

JAMES NIVEN,

Medical Officer of Health.

July, 1915.

ANIMAL REFUSE AND FLIES.

To Pork Butchers, Tripe Boilers, Tenants of Fried Fish and Chip Shops, Fish Dealers, and Restaurant Keepers.

Animal refuse left about serves as a soil on which blue-bottle flies lay their eggs, which in turn produce mature flies. Such flies may carry infection. All animal food of a perishable character should be, as far as possible, kept covered over.

Any waste materials should be at once placed in galvanised bins, provided with a close-fitting cover, and removed at frequent intervals not exceeding one week. The premises should be kept clean.

> Bone boilers should collect only fresh bones, which must be properly stored, and used as soon as possible.
>
> Special means should be used for the destruction of flies.
>
> A solution of borax, 12 ozs. to the gallon, may usefully be sprinkled over collections of bone to prevent the breeding of flies.
>
> JAMES NIVEN,
> *Medical Officer of Health.*
>
> July, 1915.

Leaflets of precautions in respect of Diarrhœa are also given out by the District Registrars to mothers registering the birth of an infant.

A constant effort is also maintained to improve the condition of stables and the manner in which horse manure is stored. Formerly this work was directed by Mr. Brittlebank (now Lieut. Brittlebank, serving in the Army). Since he left this work has been directed by Dr. W. A. Young (now on Service).

In each case a specification is made out of the alterations required, and the carrying out of these is in the charge of the Sanitary Department. Progress in this matter is necessarily slow.

The domestic refuse which was formerly deposited on the Corporation tips is now burned in the destructors of the Cleansing Department. To this an exception must be made in the case of street sweepings. But undoubtedly the tips are improved so far as the production of flies is concerned.

An effort will be made to secure the removal of all manure within a week of deposit, though it is precisely in this that difficulty has been experienced in former years.

As regards the treatment of Summer Diarrhœa, two experiments were made by the Sanitary Committee last autumn.

A ward erected at Monsall Hospital primarily to receive the infants of mothers suffering from Puerperal Fever, was utilised for the treatment of Diarrhœa by normal saline injections and otherwise, and, so far as could be judged, with success.

An Out-patient Clinic for Diarrhœa was conducted by Dr. Mabel May at the Chorlton Dispensary, the Committee of that institution readily giving facilities for treatment. Patients were for the most part sent by the Health Visitors' Department and by the School for Mothers.

The number of mothers attending was not great, especially at the beginning of the experiment. But the results were, on the whole, satisfactory. Dr. May is now at the Red Cross Hospital in Servia, and it has not been considered advisable to repeat the experiment during the present year.

The total expense of this experiment, which extended over a period of three months, was £120 9s. 7d.

But a certain amount of this was on equipment and drugs, which will be partly utilised for other purposes.

Dr. May's report on this experiment is here reproduced:—

REPORT ON THE DIARRHŒA CENTRE,

Chorlton-upon-Medlock Dispensary.

August 10th—November 10th, 1914.

On August 10th, 1914, a Diarrhœa Centre was opened in the Chorlton-upon-Medlock Dispensary for the treatment of children suffering from Summer Diarrhœa.

Although the usual epidemic of Summer Diarrhœa occurred much later this year than it usually does, it would have been better if the Centre had been opened earlier.

It took some time for the Institution to become known, and when the epidemic did start we did not get the numbers we should have had had we been better known.

The staff of the Diarrhœa Centre consisted of a medical officer, one nurse, a dispenser, and a ward maid. Two cots were provided, so that those cases who required rest after treatment could be kept in for a few hours, and also in order that those children who were seriously ill, and for whom accommodation could not be found in the hospitals, might be kept under observation and given appropriate treatment at any rate during the day time. Provision was also made for the preparation of different kinds of food for the infants, and many of the mothers were shown how to prepare such food.

In several of the more severe cases food ready prepared and sterilised was given to the mothers in sealed bottles to take home. Babies kept in the Dispensary during the daytime were always given such food for the night.

Unfortunately the Centre was not open on Sunday, and it was impossible for the food given on Saturday to remain good until Monday afternoon. At the weekend, therefore, the mothers of these children got their own milk, and time after time we found that the ground gained during the week was lost at the weekend.

In all, 93 children came under treatment, and about 420 attendances were made. At every visit the mother was talked to and taught how to treat the child, and an endeavour was made to instil some of the elementary principles of hygiene, etc.

There were 13 deaths and 80 recoveries. Eleven children were kept in the Dispensary for periods varying from a few days to several weeks. The cases fell under one of three headings :—

(1) Those dangerously ill when first seen.

(2) Those seriously ill.

(3) Mild cases.

(1) There were 23 cases dangerously ill when first seen ; 10 of them died, and 13 recovered. Of the 10 who died, 5 were moribund when they were first brought to the Dispensary.

If possible all cases under this heading were sent at once to one of the hospitals. One went to the Northern, 2 to Monsall, 2 to St. Mary's, and 13 to the Baby Hospital. When this could not be done they were kept in the Dispensary. Practically the same routine treatment was followed in every case. All milk was stopped for a day or two, and Virol, Barley water, Albumen water, etc., was given. The rectum was washed out and salt solution was injected. In three cases the saline solution was injected subcutaneously. The bowels were well cleared by aperients and intestinal antiseptics (Petroleum, Salol, Calomel, etc.) were given. When the Diarrhœa had stopped each child was treated individually and different kinds of food were tried until one was found to suit. Milk and Barley water or Glaxo, with the addition of a little Virol were chiefly used.

(2) Under the heading of those seriously ill there were again 23 cases. Six of these were kept in the Dispensary during the day time, and there was one death. The routine treatment was the same as for the last class of case.

Those children who went home were usually kept in the Dispensary a couple of hours after rectal lavage and saline injection. It was found that the best food to give them was Glaxo, whereas the babies we kept in the Dispensary throve better on ordinary cow's milk.

(3) The remaining cases were the mild ones, and were often cured after a single rectal washout or merely after a good dose of Castor Oil or Grey Powder.

Instructions were given in these cases also not to allow any milk while the Diarrhœa lasted.

Many of the mothers were shown how to make whey, albumen water, barley water, etc., and how to sterilise milk. At first they were taken in classes of seven or eight, but it was found better to instruct them individually, on account of the limited space and help at our disposal.

Almost every case before being marked as discharged was visited in its home by the nurse, so as to see if the child was really cured or not. In this way the two remaining deaths were discovered. One death occurred a fortnight and the other two months after the last visit to the Dispensary.

With regard to the influence of breast or artificial food on the incidence of Diarrhœa, it is interesting to note that out of 49 children under a year old 30 were not breast fed, 14 were breast fed, and 5 had been on the breast but were in process of being weaned.

On the other hand, two very bad cases of Diarrhœa occurred in two children not yet weaned, of whom one was one year and five months old and the other over two years.

In connection with artificial feeding it was noted that although we in the Dispensary got better results with ordinary cow's milk, suitably diluted, than with any patent foods, yet the mothers in their homes did much better with Glaxo or some form of dried milk.

The reason is probably that with a patent food each feed is freshly made, and there is much less danger of contamination than there is in the case of cow's milk.

Very good results were obtained in the case of babies still on the breast by giving a preparation known as Lactagol to the mothers. They were told not to wean the baby, but to draw off the milk during the few days the child was not allowed milk. Lactagol was then administered and the milk increased greatly in quantity, and that it also improved in quality was evidenced by the rapid improvement in the baby.

This Diarrhœa Centre having been somewhat in the nature of an experiment, it remains to be seen what conclusions can be drawn from it.

The first is the necessity and utility of such an institution. The number of cases may be somewhat small, but we started late and it was a new venture. The thing to remark is that out of 93 cases, 46, or almost 50 per cent., were serious cases urgently needing treatment. Had it only been known sooner that such an institution was in existence, I cannot help thinking that our death-rate would have been smaller, for in every case of death but one the children had been ill for periods varying from one week to two months before they came to the centre.

Another thing that was very forcibly brought home to us was the necessity for greater hospital accommodation for cases of Summer Diarrhœa. We frequently had to wait over a week, and sometimes as much as three weeks before we could place really urgent cases. Most children's hospitals have not the nursing staff necessary for a large number of Diarrhœa cases. Moreover, such cases are lengthy ones, they block beds often for months, and also they are exceedingly infectious. The new Babies' Hospital of course takes such cases, but it only has 12 beds. Another very noticeable thing was that although in the majority of cases the Diarrhœa itself cleared up fairly quickly, the child remained for a long time in a very weak condition, and was in far more need of good nourishing food than of medicine. Relapses were common, and could often be traced to errors of diet. They were much more common when the children were allowed the ordinary cow's milk that they obtained at home, than when Glaxo or some other form of dried milk was given.

It is very difficult to make the mothers understand the absolute and scrupulous cleanliness necessary in the storing of milk and the preparation of the feeds. It is useless telling them to boil or sterilise the milk when they leave it in uncovered or dirty jugs, and the flies get in, or when they use an unwashed bottle or teat for feed after feed.

Starting with a reliable milk supply as a *sine qua non*, the remedy for this state of things appears to be teaching in season and out of season. The educational work, such as that done by the schools for mothers, and which has been an important part of the work of this centre, is capable of great expansion ; and, further, perhaps the plan started on a very small scale in the Centre, of giving the day's food ready prepared and sterilised in stoppered bottles might, if extended, be of some use.

It certainly would not eliminate Summer Diarrhœa, but it would go a long way towards eliminating one of the chief factors in its causation, viz., badly prepared, unsuitable, or contaminated food.

In conclusion, the work done this year, although tentative, has been useful, and I am convinced that if it were continued its value would grow. Further experience would show what mistakes and pitfalls to avoid, and what lines of treatment and education would be most efficacious in curing and preventing this terrible disease.

MABEL E. MAY, M.B., Ch.B.Vict.,

Medical Officer to the Diarrhœa Centre.

The following tables set forth the facts for the year :—

TABLE I.—1914.—DIARRHŒA AND SIMPLE CHOLERA.—DEATHS UNDER TWO YEARS OF AGE PER 1,000 BIRTHS.

This table of comparison shows that the Diarrhœa rate in 1914 was but little above that of the 97 great towns, and was below that of London.

	1911	1912	1913	1914
England and Wales	43·65	8·53	23·41	20·41
97 Great Towns	51·30	10·91	29·33	26·09
London	47·55	12·42	27·50	27·64
City of Manchester....................	55·80	13·65	30·76	26·85
Manchester Township	88·10	25·89	55·43	52·84
North Manchester..........................	49·55	10·97	27·22	18·81
South Manchester	47·16	10·70	24·08	21·77
145 Smaller Towns	48·70	8·01	24·73	19·84
England and Wales (less the 242 towns)	22·12	5 52	14·39	12·64

The number of deaths in successive years, and their distribution in quarters of the year, are exhibited in the following figures :—

TABLE 2.—DIARRHŒA AND SIMPLE CHOLERA DEATHS IN QUARTERS, 1904-1914.

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Mean	1914
First Quarter......	34	23	32	14	29	19	30	44	49	60	**33**	67
Second Quarter...	38	31	37	18	29	35	29	50	40	46	**35**	53
Third Quarter.....	626	615	780	72	423	171	236	958	102	351	**433**	290
Fourth Quarter...	63	60	132	187	110	43	56	97	81	165	**99**	114
	761	729	981	291	591	268	351	1149	272	622	**600**	524

From Table 2 it will be seen that the seasonal prevalence of Diarrhœa extended into the fourth quarter.

The meteorological data given in the following table show that the third quarter was warm and humid:—

TABLE 3.

Third Quarter of the years	Mean Temperature	Rainfall, Inches	Humidity, per cent.	Diarrhœa and Simple Cholera Mortality. Annual Rate (third quarter) per 1,000 living
1891	58°·2	12·8	79 %	1·57
1892	57°·0	12·5	78 %	2·07
1893	60°·4	10·7	74 %	4·95
1894	57°·8	9·0	78 %	1·55
1895	60°·4	11·2	77 %	4·17
1896	58°·5	9·7	76 %	2·93
1897	58°·9	9·7	73 %	6·01
1898	60°·1	6·1	74 %	6·00
1899	60°·8	7·7	75 %	6·96
1900	60°·3	9·6	78 %	4·14
1901	61°·9	6·5	74 %	6·33
1902	57°·6	5·9	78 %	0·88
1903	57°·8	12·3	77 %	2·19
1904	60°·2	6·9	73 %	4·48
1905	58°·9	9·4	76 %	3·89
1906	60°·8	6·2	75 %	4·91
1907	58°·5	7·8	77 %	0·45
1908	59°·2	10·7	78 %	2·61
1909	57°·8	10·4	79 %	1·04
1910	58°·1	9·1	79 %	1·32
1911	63°·0	6·7	69 %	5·48
1912	56°·9	12·3	79 %	0·56
1913	59°·4	4·9	80 %	1·89
Mean	**59°·2**	**9·0**	**76 %**	**3·32**
1914	59°·8	9·2	77 %	1·57

The distribution of the disease, in weeks, is shown in the following table:—

1914—TABLE 4.

DEATHS FROM DIARRHŒAL DISEASES IN MANCHESTER IN THE WEEKS ENDING ON THE DATES GIVEN BELOW.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Jan. 10	6	April 11	3	July 11	2	Oct 10	23
" 17	8	" 18	7	" 18	5	" 17	14
" 24	7	" 25	4	" 25	8	" 24	8
" 31	6	May 2	3	Aug. 1	11	" 31	11
Feb. 7	1	" 9	...	" 8	9	Nov. 7	10
" 14	3	" 16	5	" 15	15	" 14	8
" 21	5	" 23	9	" 22	16	" 21	6
" 28	5	" 30	...	" 29	26	" 28	8
Mar. 7	3	June 6	5	Sept. 5	29	Dec. 5	3
" 14	9	" 13	4	" 12	37	" 12	1
" 21	5	" 20	2	" 19	53	" 19	7
" 28	4	" 27	4	" 26	48	" 26	8
April 4	5	July 4	7	Oct. 3	31	Jan. 2	7
Total...	67	Total...	53	Total ...	290	Total ...	114

City Total 524

The distribution of the death-rates and mortality-rate from Diarrhœa in districts is given in the following table. The districts which suffered most were Ancoats and St. George's, though a comparatively high mortality-rate was also experienced in Central, Openshaw, West Gorton, Crumpsall, Beswick, Hulme, Chorlton-upon-Medlock, and Newton Heath.

Thus, slight as the incidence of the seasonal onset was, it visited the different distr with the usual discrimination in severity. The details are as follows:—

TABLE 5,—1914.—DEATHS AND DEATH-RATES FROM DIARRHŒAL DISEASES IN THE VARIOUS DIVISIONS OF THE CITY, WITH DEATH-RATES UNDER ONE YEAR PER 1,000 BIRTHS FOR 1914, AND AVERAGE FOR PREVIOUS 10 YEARS.

		1914			Death-rates under one year per 1,000 Births											
		Estimated Population	Total Deaths	Death-rates	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Average 10 years	1914
City of Manchester ..		739,136	524	0·71	34·1	30·8	39·8	12·2	24·0	11·1	12·6	45·0	11·0	22·7	24·3	22·1
I.	Manchester Township.	110,603	193	1·74	40·9	47·7	58·5	18·0	37·8	18·9	20·7	68·2	20·1	38·4	36·9	41·6
II.	Northern Districts ...	209,114	104	0·50	30·1	31·3	30·8	10·3	17·8	9·9	10·2	41·3	9·2	19·4	21·0	15·0
III.	Southern Districts....	419,419	227	0·54	33·0	22·5	36·7	10·7	21·5	8·3	11·0	38·5	8·6	19·0	21·0	18·8
I.	Ancoats	39,831	84	2·11	35·4	50·9	54·9	21·0	40·8	17·9	15·6	76·4	22·2	33·9	36·9	46·7
	Central	20,633	20	0·97	51·0	52·4	54·9	19·1	41·3	13·8	26·8	64·6	13·2	37·9	37·5	30·9
	St. George's	50,139	89	1·78	41·1	43·3	62·8	15·3	34·3	21·6	22·9	62·8	20·6	42·1	36·7	40·7
II.	Cheetham	44,218	7	0·16	10·7	18·8	19·6	7·5	10·9	6·9	4·6	19·2	9·5	12·5	12·0	4·0
	Crumpsall	10,608	6	0·57	15·2	23·9	20·7	..	9·3	..	4·5	24·6	..	5·5	10·5	27·2
	Blackley	14,914	3	0·20	23·5	3·8	3·5	3·7	6·9	3·5	3·1	39·6	..	2·9	9·1	7·0
	Harpurhey	17,531	10	0·57	13·1	21·7	40·1	13·7	11·7	16·5	6·3	15·4	14·8	18·8	17·2	18·7
	Moston	26,664	7	0·26	25·5	8·4	13·2	2·0	1·9	5·0	4·9	30·8	6·3	3·0	10·1	7·8
	Newton Heath	42,988	26	0·60	31·4	43·3	36·0	16·8	22·0	13·3	7·3	45·5	13·2	28·4	25·7	21·7
	Bradford	25,617	18	0·70	52·5	47·7	53·6	8·7	34·6	12·2	22·2	68·9	7·7	35·8	34·4	18·2
	Beswick.............	12,174	14	1·15	60·8	43·2	23·0	19·0	37·6	20·2	23·9	75·3	9·7	18·6	33·1	24·7
	Clayton	14,400	13	0·90	38·4	40·1	41·2	7·8	9·8	2·4	17·0	52·9	10·4	26·3	24·6	15·5
III.	Ardwick	39,621	29	0·73	38·5	28·7	42·8	12·8	29·0	13·5	16·0	73·4	4·6	30·3	29·0	17·6
	Openshaw	32,064	28	0·87	28·0	23·9	50·0	8·2	24·7	14·2	13·9	45·8	8·2	21·9	23·9	28·2
	West Gorton	26,884	28	1·04	47·2	35·1	60·0	28·5	19·6	11·8	17·9	61·8	2·7	22·3	30·7	28·0
	Rusholme and Kirk ..	43,833	7	0·16	12·7	10·5	21·2	2·4	11·1	3·4	2·4	31·4	2·7	12·3	13·0	8·7
	Chorlton-on-Medlock .	54,192	37	0·68	23·8	29·1	32·8	13·7	25·9	5·1	11·4	28·0	8·0	23·8	20·2	22·6
	Hulme	62,698	53	0·85	39·2	22·3	33·6	10·8	28·3	10·2	12·2	44·5	17·9	26·4	24·5	24·5
	Moss Side	35,823	7	0·20	..	3·5	29·8	1·7	1·6	..	5·2	7·6	10·0	5·7	7·2	9·1
	Withington	55,572	12	0·22	..	11·2	19·4	2·2	10·3	2·2	2·2	15·5	4·0	6·6	8·2	11·3
	Gorton	46,095	21	0·46	..	..	..	..	..	..	16·7	31·1	10·3	15·1	..	13·2
	Levenshulme	22,637	5	0·22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

From the above table it will be seen that, the total rates of mortality being approximately equal, there are in some districts increases from 1913 to 1914, in others diminutions, and these often of a marked character. This resembles the behaviour of an ordinary infectious disease. It is, however, practically certain that Diarrhœa does not spread after the manner of Measles or Whooping Cough, and some other mode by which areas of diffusion may be produced has to be looked for. Such a mode would be provided by the irregular production of swarms of houseflies, assuming these to be carriers of infection. And most likely this is the explanation of the observed facts.

OPHTHALMIA NEONATORUM.

By Dr. M. A. C. Douglas.

During the year 1914, 724 cases of Inflammation of the Eyes were notified from various sources, and visited by the Eye Nurses.

Of these, 43 were cases of disease in children and adults: 35 suffered from simple Conjunctivitis, 5 had Blepharitis, 1 suffered from Keratitis, and 2 from Trachoma.

681 cases of Inflammation of the Eyes of newly-born children occurred. Of these, 414 were notified by the medical attendants (either private or at the Royal Eye Hospital) as cases of Ophthalmia Neonatorum. The remaining 267 cases were notified by midwives, but the medical attendants considered them to be cases of Conjunctivitis only.

The following table shows the distribution of cases both as regards the districts in which they occurred and the month of the year. The cases in which the corneae were affected are shown on the first table also.

The largest number of cases of true Ophthalmia occurred in Hulme, Ardwick, Chorlton-upon-Medlock, and St. George's.

The monthly rate of notified cases varies considerably, and there seems no special reason for the rise and fall in numbers.

August and September head the list, followed by June, July, April, and May.

TABLE A, 1914.—SHOWING THE NUMBER OF CASES OF OPHTHALMIA NEONATORUM NOTIFIED MONTH BY MONTH IN DISTRICTS.

Month of the Year	January	February	March	April	May	June	July	August	September	October	November	December	Total	Cases not Notified	Cases with Corneal Com- plications
Ancoats	1	..	3	1	3	1	1	1	5	2	..	4	22	37	2
Central	2	1	1	1	3	1	..	1	2	2	2	1	17	8	2
St. George's	2	..	3	4	5	3	2	5	2	4	3	5	38	28	10
Cheetham	1	3	2	7	..	1	2	4	2	2	1	1	26	7	3
Crumpsall	..	..	..	1	2	..	1	..	..	..	..	..	4	1	..
Blackley	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..
Harpurhey	..	1	1	1	..	1	1	..	1	..	1	..	7	10	2
Moston	..	..	1	4	..	1	..	..	1	..	..	..	7	4	..
Newton	..	..	..	1	1	2	3	..	2	2	..	1	12	7	3
Bradford..	..	..	1	1	1	2	3	1	1	1	1	1	13	16	5
Beswick	2	..	..	..	2	1	..	..	2	2	..	..	9	15	1
Clayton	1	..	..	..	..	..	..	..	..	..	1	1	3	2	1
Ardwick	1	3	6	4	4	7	4	7	8	4	4	1	53	23	9
Openshaw	..	2	2	1	..	..	2	3	..	..	1	..	11	9	2
West Gorton	4	2	2	1	2	1	3	2	3	..	..	..	20	16	..
Rusholme	1	1	2	2	1	5	2	2	2	1	1	..	20	5	2
Chorlton-upon-Medlock .	2	6	4	3	2	6	6	2	3	3	2	3	42	18	8
Hulme	2	3	6	6	7	4	3	9	4	5	5	3	57	30	6
Moss Side	3	..	..	1	..	1	1	1	..	..	..	1	8	4	2
Withington	..	..	..	..	1	1	..	1	1	2	..	..	6	2	..
Gorton	2	4	3	1	5	1	3	3	3	2	1	1	29	19	3
Levenshulme	..	..	..	2	3	..	1	1	1	1	..	..	9	5	2
CITY..	24	26	37	42	42	39	39	43	43	33	23	23	414	267	63
Cases with Corneal Complications	3	5	4	5	7	4	7	7	5	6	2	4	59	4	63

The tables have been constructed as in last year's report, and explain themselves.

In 57 cases, other children had had Ophthalmia Neonatorum, and in one instance as many as 11 children had been infected at birth ; in another, 8 ; in another, 7 ; while in many instances more than one of the previous children had suffered from Ophthalmia.

In 24 cases where the infants were suffering from Conjunctivitis there was a history of eye trouble in other children at birth.

TABLE B—1914. OPHTHALMIA NEONATORUM. HISTORY OF MOTHER.

	Age						Parity										Labour		Attendant not present at birth	No. of mothers having had previous cases of Ophth. Neon.	History of yellow discharge	Legitimacy		Definite negligence of attendant Midwife
	—20	—25	—30	35 and Over	Not Ascertained	Total	1	2	3	4	5	6	7	8	9+	Not Ascertained	Normal	Abnormal				Legit.	Illegit.	
Notified ..	103	131	102	76	2	414	106	80	57	43	39	19	20	19	29	2	379	35	48	57	150	401	13	—
Not notified	75	77	61	46	8	267	52	53	41	28	19	20	21	7	20	6	250	17	40	24	117	261	6	—

Total cases notified 414
Total not notified ... ... 267 = 681

Table C shows the day of onset, the attendant at birth, and the place of treatment.

The greatest number of onsets was on the first day of life, and in over one-half of the cases the first signs of disease appeared during the first four days.

One-third of the cases were treated by private doctors, and the remaining two-thirds by the doctors of the Royal Eye Hospital.

In 63 instances there was involvement of the cornea, and 31 of these cases were admitted into Hospital. One to Monsall Fever Hospital with the mother, who was suffering from Puerperal Fever; 2 to Withington Union Hospital; 1 to Crumpsall Workhouse Hospital; and 27 to the Royal Eye Hospital.

TABLE C—1914. OPHTHALMIA NEONATORUM.

	Interval in days between birth and onset											Attended by				Where treated			
	1	2	3	4	5	6	7	8	9	10+	Not ascertained	Midwife	Doctor	Midwife and Doctor	Not attended	Home	Out-Patients at Hospital	In-Patients at Hospital	No Doctor
Notified	80	44	61	49	44	17	39	22	17	33	8	287	94	33	1	196	187	31	0
Not notified ..	43	38	38	29	26	13	23	23	8	17	9	240	13	14	1	204	16	0	47

Total notified cases	414
Total non-notified cases	267
	681

TABLE D.—CASES WITH INVOLVEMENT OF THE CORNEA.

Right Eye	21
Left Eye	17
Both Eyes	25
	63

Table E shows the results of the 414 cases of true Ophthalmia, and of the 267 of Conjunctivitis in newly-born infants :—

	Complete Recovery	One Eye Lost, Other Normal	One Eye Lost, the other Damaged	Both Eyes Lost	Both Eyes Damaged	One Eye Damaged	Death before recovery	TOTAL
Notified ..	42	3	0	0	0	0	11	56
Not notified	0	4	0	1	1	0	1	7
	42	7	0	1	1	0	12	63

The number of cases with corneal involvement was large—63 in all—but the results are very satisfactory, as 42 have completely recovered. In 12 instances death occurred from causes other than Ophthalmia before the infants' eyes were better.

In the case in which both eyes are recorded as lost the child was suffering from Measles, and when the case was brought to the notice of the Public Health Authorities both corneae had perforated. In the 7 cases in which one eye is reported lost, 4 were not notified until some weeks after the onset of the disease, the remaining 3 were inmates of the Royal Eye Hospital.

In one of the 11 notified cases in which death occurred before recovery, the right cornea was hazy and the left ulcerated, the infant was premature and very weakly, only weighing 3lbs. at birth, and although medical aid was obtained at the onset the vitality of the child was very low.

The remaining 10 cases would have recovered.

The total numbers of cases of Ophthalmia and Conjunctivitis in newly-born infants were: in 1911, 525; in 1912, 667; in 1913, 573; and in 1914, 681. The percentage of cases with corneal complications in 1911 was 7·23, as compared with 11·39 in 1912, 12·04 in 1913, and 9·25 in 1914.

The two nurses appointed in 1911 have continued the work in 1914 in a most efficient manner. The routine followed has not been altered.

ACUTE ANTERIOR POLIOMYELITIS.

By Dr. W. St. C. McClure.

Cases of Poliomyelitis were investigated and subsequent enquiries made as to the permanency or otherwise of the paralysis in each case.

During the year 12 cases were notified, and, in addition, a further case was discovered in one of the affected households. On the other hand, in 4 instances the diagnosis was revised to "Infantile Digestive Disturbance," Rickets, Tubercular Meningitis, and Cerebral Tumour respectively.

There were, therefore, 9 cases in which the diagnosis of Poliomyelitis was finally adhered to.

These occurred in widely-separated districts of Manchester, and were distributed throughout the year as follows:—January, 2 cases; July, 1; August, 2; October, 4. Except in one instance no connection between the cases could be determined.

The ages of those affected and the results of their illness is shown in the following table :—

1914

		NUMBER OF CASES																							
		0-1 year						1-5 years						5-10 years						10 years and over					
		Male			Female			Male			Female			Male			Female			Male			Female		
	Total Number of Cases Notified	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*	Cases	Deaths	Permanent Paralysis*
Acute Poliomyelitis..........	9	...	...	...	...	...	...	4	...	4	2	...	1	2	...	1	1	...	1	...	...	...	...	...	...
Cerebro-Spinal Fever.	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...

* *i.e.* Recovered with permanent paralysis of one or more groups of muscles.

Nature of the paralysis:—R. leg, 4 cases; L. leg, 1; both legs, 3; R. arm and L. leg, 1 case.

Two of the notified cases presented some unusual features, and the following notes may be of interest:—

Case 1.—Symptoms caused by Cerebral Tumour.

Girl, aged 9 years, was in good health until November 13th, when she had swelling and pain in the right foot. She was feverish and in bed for ten days. Doctor in attendance said it was Rheumatism.

On December 3rd, while sitting in a chair she suddenly fell over, was sick, and had convulsions, being unconscious for over an hour. Doctor called in found some valvular heart trouble and a temperature of 103° F.

She appeared to improve, and on Christmas Day could use all her limbs.

On December 27th she could not raise her right arm.

On December 31st the case was notified as Poliomyelitis. On this date child was emaciated, skin dry, temperature 99·5, both knee jerks absent, plantar reflexes present, toes flexed, Kernig's sign absent, right arm paralysed, partial aphasia, no squint, pupils appeared normal, no facial paralysis, legs wasted but not paralysed. There was a slight systolic murmur at the apex of the heart, and the possibility of malignant endocarditis and cerebral embolism was considered.

On January 9th the patient had considerably improved, heart murmurs had cleared up, speech was restored but was still defective, paralysis of arm, especially forearm and wrist, persisted.

This improvement was not maintained, and she was removed to Pendlebury Hospital, where she developed persistent vomiting, headache, and optic neuritis, and died on February 3rd from Cerebral Tumour, probably tubercular, although no confirmatory post-mortem examination was possible.

Case 2.—In which the diagnosis of Poliomyelitis was adhered to.

Child, aged 4 years, had fairly good health all her life, but occasional attacks of Bronchitis.

On October 3rd she seemed pale and unwell.

On October 10th she was fairly well in the morning, but yawned a deal and was sleepy. At 11 a.m. she went to sleep, and presently woke up screaming. She was sick and frothed at the mouth, and had a fit. Doctor called in found her unconscious, with twitching of right side of body, slight cyanosis, pupils equal and reacting to light, temperature 103° F. After a hot bath she improved, but Doctor when summoned again in a few hours found her still unconscious, cyanosed, rapid but strong pulse, temperature 106° F. She was put in a cold bath for ten minutes and the temperature dropped below normal, and in half-an-hour's time she was asleep.

On the following day she was better, but drowsy, and the next day the doctor noticed paresis of right arm and leg, also aphasia and facial paralysis, and notified the case as Poliomyelitis.

When Dr. McClure saw her on October 26th she looked healthy, and appeared well in herself. Right arm was weak, but no definite paralysis; right leg in same condition, and colder than the left. There was some right facial paralysis and almost complete aphasia. Both knee jerks absent, plantar reflexes normal. Subsequently, complete recovery took place. The diagnosis lay between Cerebral Hæmorrhage and Poliomyelitis, and although rather a doubtful case the diagnosis of Poliomyelitis was adhered to.

CEREBRO-SPINAL FEVER.

By Dr. W. St. McClure.

Two cases were notified during the year.

In one case the fluid obtained by lumbar puncture showed no evidence of this disease, and the diagnosis was modified to Influenza. The patient recovered.

The second case occurred in a child aged 4 years, and was notified after death. A post-mortem specimen of cerebro-spinal fluid showed the presence of meningococci.

Neither of the cases occurred in the neighbourhood of any place occupied by troops.

STATEMENT OF WORK OF THE HEALTH VISITORS.

During the year 1914 the Infant Life Preservation Sub-Committee met nine times.

At the end of the year the staff consisted of the Superintendent; two female clerks—one at a salary of 20s. a week, and the other at 25s.; 18 Health Visitors, 12 of whom were certificated, and received salaries ranging from 30s. to 40s.

a week; and 6 others, who were taken over from the Ladies' Public Health Society by the Corporation in 1908, and whose salaries vary from 18s. to 30s. a week. One of the Health Visitors resigned, and two new appointments were made.

All the Health Visitors are provided with two uniforms a year, consisting of navy blue tailor-made costumes, hats, and boots.

A leaflet specifying the list of duties of the Health Visitors was drawn up in 1908, and was published in the Annual Report for that year.

A table giving a detailed account of the Health Visitors' work is appended, and from this it will be seen that there have been 5,913 primary and 55,906 subsequent visits paid to infants during the year. This enumeration only includes the regular monthly visits, and does not allow for numerous other calls when there is sickness, poverty, neglected children, or sanitary work to be attended to, although at each visit the Health Visitor sees the infant, and gives advice where necessary.

A careful record is kept of every infant whose existence comes to our knowledge; and every time a change of food is advised, or medical assistance sought, the facts are notified on the Infant Sheet.

A certain number of the babies are weighed each month, especially the delicate ones, and it is interesting to note how fast the old superstition is dying out that to weigh a baby is of ill-omen. Now the mothers are anxious to have the weight recorded, and to watch the progress the child is making.

In connection with notified cases of Phthisis, 2,087 monthly visits were made, and 1,656 visits *re* cleansings, done either by the Corporation or by the tenants themselves.

The house-to-house inspections numbered 3,881, and re-inspections 2,216. Whilst on these visits the Health Visitors found 2,045 defects, and referred 1,411 to the Sanitary Department. This branch of the work is perhaps the most difficult, as some of the people naturally resent having their houses systematically inspected, but with tact and perseverance the difficulties are generally overcome, and the Health Visitors are able to combine the two-fold work of seeing that disrepairs are remedied, dirty houses cleaned, and of imparting helpful knowledge and advice as regards the health of the children, and even of the mother herself. That these inspections are useful is obvious from the fact that, apart from the 560 defects remedied by the Sanitary Department, the Health Visitors record that 558 bedrooms, 588 kitchens, 1,196 yards, 1,193 closets, and 874 cellars, ceilings, etc., have been limewashed, 1017 rooms cleaned other than by limewashing, and also 615 defects remedied without the intervention of the Sanitary Inspector.

Apart from house-to-house inspections, the visiting of infants, and notified cases of Phthisis, there are many other duties which the Health Visitor is called upon to perform, but which can only be touched upon briefly in this report.

In 1909 a Cleansing Station was opened by the Sanitary Committee at the Corporation Depôt in Oldham Road for the cleansing of verminous children. School children found to be in a verminous condition are sent by the Education Authorities to the Cleansing Station, and at the same time a notice to this effect is sent to the Medical Officer of Health, who refers the case to the Health Visitor for that district. It is her duty to visit and report to the Medical Officer of Health upon the condition of the house, and especially of the bedrooms and bedding. She is required to inspect all the children in the house, whether of school age or under, and to instruct the mother, or person in charge, as to treatment, and also to continue to visit at regular intervals until she can report that the house has been cleansed, the bedclothes washed, and the children kept clean. This work has to be specially arranged, as those children who attend school can only be seen during the dinner hour or on Saturday, and frequently when the Health Visitor calls to inspect the house and children she finds that the family removed months ago, and much time is spent in trying to trace them. If, after making full enquiries, the family cannot be found, a letter is sent to the School Medical Officer, Dr. Ritchie, asking him to obtain the correct address.

Those cases which come outside the area worked by a Health Visitor are undertaken by a Nurse specially appointed to deal with them, or by the District Sanitary Inspector.

The question of how best to deal with these verminous cases was brought up for discussion at a meeting of the Infant Life Preservation Sub-Committee, and the Medical Officer of Health was instructed, together with the Chairman and Miss Howard, to interview Dr. Ritchie, the School Medical Officer, and see whether it would be possible to cleanse a larger number of children, and prosecute parents who failed, after cleansing, to keep their children clean. The outcome of this and other interviews was that a Special Nurse was appointed to undertake the cleansing of verminous children at the Cleansing Station, under the supervision of the Superintendent of Health Visitors, and it was also arranged that in cases of prosecution she should give evidence in court. She is required to visit the homes of children, and, where possible, cleanse the heads of children both under and over school age.

The work of the Cleansing Station was taken over by the Health Visitors' Department on 18th February, 1914, but the station was closed from July 7th to October 21st. The number of children cleansed was 297.

The maximum number of children who can be cleansed in one day is 10, and as the Cleansing Station is only used two days per week, the number of children cleansed could not exceed 20 per week. As a matter of fact, the average has only been 10 per week.

Of the 297 children brought to the Station 59 had body vermin only, 57 head vermin (not including nits), and 181 had both body and head vermin. One child was found to be seriously ill with chest complaint, and was removed in an ambulance to her own home and admitted to hospital next day. Thirty-six other children were found to be in a very poor state of health, suffering from Impetigo, Scabies, Blepharitis, Discharging Ears, Enlarged Tonsils and Glands, Deformities, etc.

It must be remembered, too, that these children are a source of danger to the public.

Many of the children presented a very pathetic appearance. Not only are they poorly nourished and deformed, but in the majority of cases their clothing is absolutely inadequate. Some have no underclothing at all beyond a piece of rag across their shoulders, and few have soles to their stockings and boots. It is hardly to be wondered at that these children suffer from Bronchitis and other Chest Troubles.

In five instances legal proceedings were taken against the parents on account of the verminous condition of their children, and a fine of 2s. 6d. and costs was imposed in each case.

Notification of Births Act.—The total number of notifications received under the Act was 16,376, and of these 4,172 were reported by Doctors, 10,802 by Midwives, and 1,402 by the parents, etc. Out of the total, 16,376, those occurring in the districts covered by the Health Visitors numbered 4,766. The registered births within the City numbered 18,697, and 5,346 were referred to the Health Visitors.

The visiting and constant supervision of neglected children takes up a considerable time. 59 cases were referred to the N.S.P.C.C. during the year, and many others were warned again and again without being reported. Although only 878 such visits in connection with this work are recorded, additional ones were paid, but are not noted under this particular heading, inasmuch as they were made in the ordinary course of house-to-house visiting or other branches of the work, and are entered under the respective headings.

Through the kindness of the Lord Mayor we received a supply of Charity Forms, which entitled us to flannel and blankets, for which we are very grateful. We also received a number of flannel garments for infants, and these were distributed by the Health Visitors during the winter to deserving cases.

STATEMENT OF WORK DONE BY THE HEALTH VISITORS DURING THE YEAR 1914.

Districts	House-to-house inspections														Work done by Sanitary Dept.		Work done under the direction of Health Visitors																Infants Visited		Visits re Phthisis			Visits re Sick Children	Neglected Children		Charity Cases		Number of families assisted	Recommends given	Mothers' Meetings		Verminous Children		Visits re removal of infants	Visits re complaints and special cases
	Inspections								Re-inspections								Limewashing										Cleansing other than Limewashing									Cleansings by														
	Number	Overcrowded	Disrepair	Dirty	Cellar dirty or in disrepair	Yards defective	Closets defective	Referred to Sanitary Dept.	Number	Number of visits	Defects found	Defects remedied	Visits re defects	Referred to Sanitary Dept.	Overcrowding abated	Defects remedied	Number of visits	Bedrooms	Kitchens	Yards	Closets	Cellars	Coal-places	Ceilings	Staircases	Others	Rooms	Cellars	Yards	Closets	Floors	Others	Primary	Subsequent	Monthly	Corporation	Tenants		New Cases	Visits	New Cases	Visits			Number	Average Attendance	New Cases	Visits		
Ancoats—West	279	3	59	179	7	9	14	10	320	74	20	99	24	39	...	18	236	141	85	107	105	16	8	27	54	20	65	10	16	3	392	50	229	3042	217	26	146	...	8	16	1	...	4	1	...	...	4	85	5	21
" North	134	2	15	41	...	...	1	14	68	142	64	23	...	31	1	8	108	42	58	59	48	11	14	3	1	...	36	...	...	...	6	...	442	3756	244	16	183	35	...	4	86	10	36	50	40	50	6	48	...	2
" Central	192	3	87	62	3	33	16	23	72	32	6	41	3	86	17	45	144	31	45	82	83	9	9	29	9	2	24	3	4	7	15	1	271	3145	153	27	46	1	31	6	24	...	18	8	...	...	9	47	416	68
" South	352	2	60	198	3	20	13	16	324	157	6	65	2	21	...	10	261	84	146	200	200	37	81	113	35	4	286	1	33	15	3	...	259	2904	171	22	126	28	7	7	16	43	115	17	2	77	11	41	...	2
" East	227	5	110	98	1	57	21	117	249	120	...	18	72	164	13	218	232	74	65	125	127	5	8	55	13	3	151	...	1	2	...	2	256	3370	107	54	55	...	11	3	13	92	132	...	34	81	13	32	...	...
London Road	292	11	64	115	13	28	28	52	105	65	5	14	...	31	...	10	104	16	7	50	47	3	4	4	4	5	49	...	...	...	2	1	246	2707	113	112	23	14	11	13	31	4	5	6	...	...	20	123	...	10
Deansgate	90	4	37	41	3	16	11	23	47	94	2	17	...	27	1	9	54	21	15	46	46	...	...	28	9	3	14	...	5	3	2	...	344	2652	153	68	27	...	9	7	12	...	16	21	...	...	11	107	4	12
St George's—North	370	2	73	41	...	31	19	4	103	280	2	71	4	51	...	5	97	36	23	27	28	3	2	3	18	5	34	...	3	5	24	9	427	2942	182	66	162	...	...	...	27	...	122	2	34	31	4	32	34	3
" East	...	...	...	...	...	...	...	3	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	341	3873	277	86	128	...	...	...	2	3	11	1	33	60	...	3	...	...
" Central	193	2	50	91	...	5	6	25	76	78	...	36	22	44	...	10	154	21	44	109	110	2	2	3	1	3	6	...	...	...	3	...	260	2885	66	28	9	...	...	...	37	...	3	...	...	...	33	182	16	13
Chorlton-on-M.—North	432	3	119	156	13	78	35	24	350	164	1	99	12	58	1	73	215	56	42	170	180	37	4	8	10	3	126	7	10	4	78	9	328	3103	218	109	25	2	14	14	24	1	...	6	...	...	43	193	5	33
" South	411	2	92	108	39	6	22	115	227	142	3	18	4	45	1	61	44	22	5	80	78	18	...	8	...	11	51	...	...	...	...	...	268	3201	103	35	21	1	6	...	48	13	24	7	...	.	27	58	...	3
Hulme—Central	396	5	157	136	49	21	31	68	180	355	5	50	11	55	1	28	135	6	47	108	108	21	7	53	8	...	151	3	12	8	24	7	366	3214	...	...	...	137	135	189	53	6	11	9	...	...	28	199	2	...
" East	46	12	24	16	...	4	2	12	...	...	...	...	...	4	...	...	36	4	...	16	16	1	...	...	...	7	...	...	...	...	...	...	390	3368	...	...	...	...	8	6	32	...	...	12	...	...	25	116	...	1
Gorton—West	164	...	36	53	...	36	7	...	36	68	3	17	8	21	2	2	9	1	1	7	7	...	...	...	...	...	18	...	3	1	...	...	558	4515	83	16	40	...	2	...	71	...	35	2	...	...	22	136	213	19
Openshaw	122	3	46	35	...	13	17	33	36	20	5	10	...	4	...	5	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	322	2742	...	...	...	41	98	263	26	28	19	28	...	...	...	...	26	13
Ardwick	181	7	108	85	33	34	44	119	23	12	56	37	13	63	...	21	4	3	5	10	10	1	...	7	2	...	4	1	19	19	5	...	482	2640	...	...	...	5	...	8	4	1	3	3	...	...	39	176	...	2
Two Special Nurses	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	124	1847	...	...	...	73	2	...	4	36	17	80	...	...	74	380	575	...
Total	3881	66	1137	1455	164	391	287	658	2216	1803	178	615	175	753	37	523	1837	558	588	1196	1193	164	139	341	164	66	1017	25	106	67	554	79	5913	55906	2087	665	991	337	342	536	511	237	571	253	143	60	369	1958	1296	202

571 families have been assisted with food or clothing, and 59 recommends for the Boys' and Girls' Summer Camp, Lord Mayor's Charity Forms, etc., were given away by the Health Visitors during the year.

A summary of the work done by the Health Visitors under the supervision of the Ladies' Society for Visiting the Jewish Poor and of the Medical Officer of Health is given in the following table :—

Work of the Jewish Health Visitors, year ending 2nd January, 1915.

DISTRICT	Houses Visited		Condition of Houses							No. of Houses containing Lodgers	Complaints requiring action by Sanitary Department	Sickness			Leaflets left at Houses
	First Visit	Not First	Dilapidated	Not Dilapidated	Clean	Dirty	Improved since last Visit	Not Improved	Overcrowded			Infectious	Non-Infectious	Total Sickness	
Red Bank	283	685	80	888	916	52	192	16	1	337	159	30	327	357	661
Strangeways	...	764	4	760	759	5	133	28	...	207	135	55	103	158	744
Total	283	1449	84	1648	1675	57	325	44	1	544	294	85	430	515	1405

DISTRICT	Disinfecting Powder left at Houses	Limewashing								Reports as to Children being Neglected (clothing, food, &c.)	Help Rendered Help rendered includes :—Giving food, clothing, &c., advising mothers as to care and treatment of children, making of sick beds, cleaning houses for sick persons, obtaining recommends for Convalescents, &c.	Infants Visited	Visits *re* Phthisis	Re-inspection of Houses
		Living and Bed Rooms	Kitchens	Yards	Closets	Cellars	Coal-places	Ceilings	Staircases					
Red Bank	808	44	86	121	126	26	1	17	5	...	283	856	124	1044
Strangeways	683	13	34	34	10	7	2	2	1	...	217	573	361	192
Total	1491	57	120	155	136	33	3	19	6	...	500	1429	485	1236

NOTIFICATION OF TUBERCULOSIS.

The following tables, relating respectively to Tuberculosis of the Lungs and to other forms of Tuberculosis, show the death-rates for the whole City, its main divisions, and each Sanitary District over a number of years, for the average of the ten years 1904-1913, and for the year 1914.

It will be seen that in the Manchester Township and North Manchester the death-rate from Tuberculosis of the Lungs rose above the average for the previous ten years, and that the total death-rate was in excess of that for the previous ten years. The excess was much the greatest in the Manchester Township.

From other forms of Tuberculosis, on the contrary, the death-rate for the whole City was the lowest yet recorded, though it was in excess of the average in the Manchester Township.

During the previous three years a rise occurred in the proportion of samples of milk taken at the station which were found to be Tuberculous. Both Professor Delépine and Lieut. Brittlebank have insisted on the comparatively early stage at which Tuberculous lesions in the udder have been detected, and on the fallacy involved in taking mere numbers as indicating the amount of infection.

TABLE I.

DEATH-RATES FROM PHTHISIS.

	STATISTICAL DIVISIONS	1904	1905	1906	1907	1908	1909	1910	1910 †	1911	1912	1913	Average 1904-1913	1914
			(1·68)	(1·81)	(1·80*)	(1·74)	(1·81)							
	City of Manchester	**1·98**	**1·56**	**1·71**	**1·70**	**1·65**	**1·70**	**1·49**	**1·51**	**1·56**	**1·53**	**1·42**	**1·63**	**1·70**
	I. Township	3·14	3·00	2·99	3·09	2·79	3·18	2·63	2·73	2·63	3·22	2·79	2·95	3·71
	II. N. Manchester....	1·23	0·96	1·03	1·16	1·08	0·89	1·12	1·18	1·17	1·05	0·99	1·07	1·21
	III. S. Manchester	1·90	1·33	1·59	1·47	1·56	1·65	1·33	1·31	1·44	1·29	1·26	1·48	1·42
			(1·53)	(1·79)	(1·64)*	(1·75)	(1·88)							
I.	Ancoats	2·26	2·78	2·48	2·82	2·19	3·08	1·97	2·02	2·43	2·75	2·59	2·54	3·34
	Central	4·35	3·58	4·28	3·85	3·16	3·76	3·15	3·18	2·75	3·95	2·76	3·56	3·97
	St. George's	3·23	2·89	2·79	2·95	3·09	2·99	2·90	3·08	2·74	3·28	2·96	2·98	3·89
II.	Cheetham.......	1·11	0·87	0·78	1·06	1·07	0·77	0·85	0·88	1·20	0·84	0·95	0·95	1·00
	Crumpsall	0·44	0·43	0·65	1·28	0·63	0·74	0·95	0·90	0·98	0·68	0·85	0·76	0·85
	Blackley	1·61	1·59	0·94	1·15	1·30	0·91	1·12	0·85	0·97	0·93	0·68	1·12	0·87
	Harpurhey	0·69	0·65	1·24	1·31	0·80	0·81	0·89	1·36	1·41	1·51	0·74	1·01	2·11
	Moston	1·17	1·08	0·72	0·78	0·76	0·94	0·94	1·06	0·73	0·85	0·81	0·88	0·86
	Newton	0·80	0·79	1·19	1·47	1·18	1·20	1·59	1·40	1·35	0·96	1·04	1·16	1·21
	Bradford	1·30	1·29	1·40	1·31	1·40	0·94	1·57	1·60	1·31	1·42	1·31	1·33	1·60
	Beswick	1·57	1·31	1·37	0·88	0·86	0·79	1·26	1·37	1·46	1·63	1·22	1·24	1·40
	Clayton	0·94	0·95	0·72	0·81	1·48	0·63	0·76	1·03	0·76	0·94	1·20	0·92	1·11
III.	Ardwick	1·78	0·98	1·81	1·52	1·28	1·70	1·33	1·50	1·83	1·28	1·09	1·46	1·74
	Openshaw	1·35	1·06	0·80	1·35	1·32	1·64	0·94	0·89	1·04	1·03	1·03	1·16	1·37
	West Gorton ...	1·53	1·38	1·65	0·94	1·31	1·25	1·41	1·51	1·81	1·19	1·24	1·37	1·64
	Rusholme.......	1·00	1·00	1·18	1·27	1·49	0·88	1·24	1·16	0·68	0·92	1·05	1·07	0·80
	C.-on-M.	2·47	1·90	2·18	2·02	2·12	2·45	1·96	1·90	2·16	2·01	2·33	2·16	2·58
	Hulme	2·26	2·07	2·19	2·04	2·28	2·38	2·02	1·87	2·23	1·99	1·78	2·12	2·01
	Moss Side	0·96	0·75	1·00	0·99	1·14	1·25	1·41	1·21	0·86	1·17	0·67	1·02	1·09
	Withington	0·78	0·50	0·84	0·83	0·80	0·68	0·64	0·59	0·81	0·72	0·77	0·74	0·63
	Gorton	1·43	1·16	1·33	1·33	0·95	1·07	0·91	0·98	1·13	0·88	0·99	1·12	1·02
	Levenshulme ...	1·14	0·85	0·46	0·77	0·60	0·86	0·60	0·68	0·95	1·00	0·95	0·83	0·71

DEATH-RATES FROM TUBERCULAR DISEASES OTHER THAN PHTHISIS.

Statistical Divisions		Mean Death-rate 1891-1900	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Average 1904-1913	1914
City of Manchester		**0·90**	**0·69**	**0·56**	**0·61**	**0·56**	**0·59**	**0·57**	**0·59**	**0·52**	**0·54**	**0·51**	**0·57**	**0·49**
I.	Manchester Township	0·99	0·79	0·69	0·87	0·76	0·83	0·72	0·72	0·66	0·75	0·77	0·76	0·82
II.	North Manchester	0·60	0·41	0·42	0·37	0·36	0·36	0·42	0·41	0·48	0·47	0·37	0·41	0·39
III.	South Manchester	1·03	0·82	0·58	0·65	0·62	0·64	0·61	0·62	0·49	0·54	0·52	0·61	0·47
I.	Ancoats	1·03	0·91	0·82	0·99	0·90	1·03	1·02	0·82	0·85	0·86	0·64	0·88	0·78
	Central	1·03	0·54	0·59	0·95	0·86	0·71	0·66	0·67	0·44	0·63	0·41	0·65	0·73
	St. George's	0·95	0·85	0·65	0·74	0·62	0·72	0·51	0·65	0·61	0·71	1·02	0·71	0·90
II.	Cheetham	0·41	0·35	0·37	0·22	0·10	0·35	0·19	0·23	0·26	0·30	0·27	0·26	0·27
	Crumpsall	0·60	0·22	0·11	0·22	0·32	0·31	0·11	0·32	0·69	0·29	0·28	0·29	0·38
	Blackley	0·73	0·54	0·64	0·21	0·21	0·30	0·91	0·30	0·74	0·21	0·20	0·43	0·20
	Harpurhey	0·93	0·42	0·45	0·67	0·50	0·34	0·24	0·51	0·94	0·64	0·51	0·52	0·29
	Moston	0·57	0·65	0·18	0·11	0·62	0·33	0·27	0·45	0·09	0·40	0·27	0·34	0·26
	Newton	0·52	0·27	0·39	0·29	0·36	0·33	0·36	0·36	0·34	0·46	0·37	0·35	0·44
	Bradford	0·75	0·49	0·69	0·68	0·52	0·50	0·67	0·71	0·71	1·03	0·58	0·66	0·66
	Beswick	0·75	0·49	0·33	0·57	0·32	0·39	0·95	0·55	0·69	0·26	0·57	0·51	0·49
	Clayton	0·68	0·56	0·61	0·40	0·44	0·34	0·69	0·29	0·61	0·43	0·35	0·47	0·56
III.	Ardwick	1·30	1·02	0·98	0·75	0·60	0·70	0·68	0·67	0·65	0·73	0·67	0·75	0·66
	Openshaw	1·12	0·99	0·78	0·73	0·66	0·58	0·58	0·77	0·65	0·51	0·50	0·68	0·50
	West Gorton	1·12	0·81	0·64	0·73	0·66	0·82	0·70	0·62	0·55	0·71	0·66	0·69	0·82
	Rusholme and Kirks.	0·84	0·46	0·58	0·49	0·75	0·47	0·29	0·48	0·25	0·27	0·37	0·44	0·21
	Chorlton-upon-Medlock	0·83	0·67	0·58	1·10	0·54	0·64	0·69	0·63	0·56	0·49	0·54	0·64	0·44
	Hulme	1·03	0·92	0·83	0·92	0·96	0·68	0·79	1·08	0·53	0·76	0·84	0·83	0·67
	Moss Side	..	..	..	..	0·25	0·76	0·66	0·39	0·33	0·47	0·39	0·46	0·28
	Withington	..	..	..	..	0·36	0·47	0·34	0·42	0·36	0·38	1·24	0·51	0·31
	Gorton	..	..	..	..	..	..	..	0·63	0·63	0·49	0·60	0·59	0·41
	Levenshulme	..	..	..	..	..	..	..	0·18	0·35	0·47	0·14	0·29	0·40

From Table 3 it will be seen that the number of cases notified in 1914 was higher than in any previous year. Fewer cases were notified by practitioners than in 1913. The increase over 1913 occurred in the numbers notified from Institutions and Union Hospitals; due, no doubt, to an increased prevalence of the disease in the poorest classes.

The primary and total notifications on Form A (Practitioners) and on Form B (Notifications from School Medical Officers) are shown classified according to ages in Table 5. (The dates are from January 4th, 1914, to January 2nd, 1915.)

Form C shows the number of notifications received from Poor Law Institutions and Sanatoria.

The high number of notifications of Pulmonary Tuberculosis at school ages, as compared with the number at the ages immediately following, deserves special attention.

From other forms of Tuberculosis the number notified is greatest at ages 0–4, after which there is a steady decline.

TABLE 3.

PHTHISIS, 1914—NUMBER OF NEW CASES OF PULMONARY TUBERCULOSIS NOTIFIED.

Year	Poor-law Cases	Institutions	Private Practitioners	Total
1900 *	578	455	540	1573
1901	625	373	341	1339
1902	667	305	303	1275
1903	556	550	251	1357
1904	512	440	250	1202
1905	527	588	291	1406
1906	565	510	304	1379
1907	634	646	310	1590
1908	659	498	346	1503
1909	681	542	384	1607
1910	543	760	356	1659
1911	517	897	423	1837
1912	488	947	969	2404
1913	345	717	1350	2412
1914	483	877	1304	2664
Total	8380	9105	7722	25207

* This table does not include 425 cases notified in 1899.

In the following table the rate of notification per 1,000 and the death-rate for all forms of Tuberculosis are shown for the whole City, and for each of its sanitary sub-divisions, also the seasonal distribution of the numbers notified. The highest numbers are notified in the first and second quarters of 1914. Usually the number has been highest in the first quarter.

		CASES NOTIFIED					DEATHS	DEATH-RATE	NOTIFICATION
		First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total	1914	Per 1000 living	Rate per 1000
City of Manchester		**1036**	**1069**	**749**	**800**	**3654**	**1623**	**2·19**	**4·94**
I.	Manchester Township	301	297	234	212	1044	501	4·53	9·44
II.	North Manchester	183	233	168	184	768	333	1·60	3·67
III.	South Manchester	552	539	347	404	1842	789	1·89	4·39
I.	Ancoats	120	113	101	64	398	164	4·12	9·99
	Central	44	49	39	43	175	97	4·70	8·48
	St. George's	137	135	94	105	471	240	4·79	9·39
II.	Cheetham	45	71	43	50	209	56	1·27	4·73
	Crumpsall	9	8	6	9	32	13	1·23	3·02
	Blackley	9	13	8	6	36	16	0·97	2·41
	Harpurhey	20	21	16	17	74	42	2·40	4·22
	Moston	16	14	11	18	59	30	1·12	2·21
	Newton	32	35	29	34	130	71	1·65	3·02
	Bradford	33	39	29	29	130	58	2·26	5·07
	Beswick	9	15	21	12	57	23	1·89	4·68
	Clayton	10	17	5	9	41	24	1·67	3·37
III.	Ardwick	72	66	35	58	231	95	2·40	5·83
	Openshaw	46	40	36	32	154	60	1·87	4·80
	West Gorton	51	52	38	41	182	66	2·46	6·77
	Rusholme and Kirkmanshulme	42	39	30	32	143	44	1·01	3·26
	Chorlton-upon-Medlock	126	119	73	104	422	164	3·02	7·79
	Hulme	113	99	54	63	329	168	2·68	5·25
	Moss Side	33	24	26	16	99	49	1·37	2·76
	Withington	2	10	4	0	16	52	0·94	0·29
	Gorton	51	57	44	42	194	66	1·43	4·21
	Levenshulme	16	33	7	16	72	25	1·11	3·18

The following table shows particulars of cases of Tuberculosis notified from institutions during the year 1914. The principal contributions are from the Manchester and South Manchester Union Hospitals, the Royal Infirmary, Ancoats Hospital, the Out-patient Department of the Children's Hospital, the Northern Hospital, and the Consumption Hospital :—

TABLE 6.

PARTICULARS OF ALL CASES OF TUBERCULOSIS NOTIFIED FROM INSTITUTIONS DURING THE YEAR 1914.

Institutions	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Manchester Union Workhouse	83	105	81	89	358
Chorlton Union Workhouse	68	81	51	45	245
Prestwich Union Workhouse...........	8	11	12	6	37
Poor-law Union Cases	5	6	2	2	15
Royal Infirmary	67	100	62	85	314
Ancoats Hospital	59	69	53	35	216
Chorlton-upon-Medlock Dispensary ...	1	5	...	1	7
Hulme Dispensary	6	2	...	...	8
Gartside Street Dispensary	59	39	31	18	147
Medical Mission, Red Bank	1	4	1	1	7
St. Mary's Hospital	21	16	1	3	41
Northern Hospital	41	42	21	40	144
Consumption Hospital	79	80	71	79	309
Southern Hospital	...	...	...	...	...
H.M. Prison	1	2	...	...	3
Jewish Hospital	2	3	5	3	13
Children's Hospital, Pendlebury	4	4	1	4	13
Various Sources	39	26	29	30	124
Total	544	595	421	441	2001
Private Practitioners	492	474	328	359	1653*

* This total includes 56 cases discovered by the staff of the Tuberculosis Office.

No difference has occurred in the methods pursued in the Public Health Department of the work.

Attention is directed to the increase in the Public Health work carried out, as shown in Table 7.

TABLE 5.

NOTIFICATIONS—1914.

Age Periods	NOTIFICATIONS ON FORM A												Total Notifications on Form A	NOTIFICATIONS ON FORM B				Total Notifications on Form B	NOTIFICATIONS ON FORM C	
	Number of Primary Notifications													Number of Primary Notifications					Poor Law Institutions	Sanatoria
	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	Total Primary Notifications		Under 5	5–	10 to 15	Total Primary Notifications			
Pulmonary Males	11	54	127	131	119	124	293	332	223	123	43	1,580	2,165	..	7	3	10	16	460	301
,, Females	6	50	120	122	120	103	231	156	85	45	15	1,053	1,371	..	10	5	15	20	85	144
Non-Pulmonary Males	21	104	100	86	49	22	41	26	13	8	9	509	632	..	4	6	10	17	10	11
,, Females.. ..	54	86	76	73	40	38	22	17	11	3	5	395	481	..	9	9	18	21	2	11
Totals	92	294	423	412	328	287	587	531	332	179	72	3,537	4,649	..	30	23	53	74	557	467

TABLE 7.—STATISTICS RELATING TO THE NOTIFICATION OF PHTHISIS.

	1914	1913	1912	1911	1910	1909	1908	1907	1901 to 1906	1899 Sep. 1 to Dec. 31 1900	Totals
ases Visited and Filed—											
Males	1612	1543	1354	1090	958	1034	971	988	5215	1017	15782
Females	1094	1052	993	717	571	567	529	600	3093	732	9948
Totals	2706	2595	2347	1807	1529	1601	1500	1588	8308	1749	25730
ouses Disinfected—											
1. By Corporation—											
(*a*) With solution of chlorinated lime only	994	822	884	754	665	590	572	581	3296	581	9739
(*b*) With lime solution only	0	0	0	0	0	0	0	0	17	109	126
(*c*) By Esmarch's method and solution of chlorinated lime	3123	3044	2842	1983	1599	1419	1177	1106	4062	0	20355
Totals	4117	3866	3726	2737	2264	2009	1749	1687 (in 1556 houses)	7375	690	30220
2. By Tenants— Esmarch's method	4564	4050	3790	3342	3127	2690	3011 (in 1632 houses)	2860 (in 1627 houses)	12750	1299	41483
Totals	8681	7916	7516	6079	5391	4699	4760	4547	20125	1989	71703
pecimens of Sputum Examined:											
Positive	1052	1165	1061	851	616	531	419	350	1608	104	7757
Negative	2269	2637	1876	1403	1135	985	866	654	2466	154	14445
Totals	3321	3802	2937	2254	1751	1516	1285	1004	4074	258	22202
eaths—											
Among all cases of Pulmonary Tuberculosis	1257	1056	1107	1116	1070	1115	1089	1082	6493	1403	16788
ases reported as sent to Hospital	2718	* 2421	1874	1957	1772	2002	2225	1993	7434	991	25387
otified from common lodging-houses	283	243	201	199	193	231	302	288	1265	187	3392
Number of cases under observation during the year	5941	4848	4305	3484	3105	2869	2572	2467	9452	about 600	...

* This number includes all forms of Tuberculosis.

There were 3467 cases on the periodical visiting lists at the end of 1914.

4,709 special cases have been entered in the Business Book for investigation and cleansing after removal to hospital, change of residence, death, or under special circumstances.

935 letters have been sent to owners with reference to as many houses, with subsequent correspondence in many instances.

627 tenants (about 13·3 per cent. of the special cases) have allowed the removal of bedding, etc., for disinfection ; or have themselves burned it in a few instances.

About 40,000 cardboard boxes have been prepared in the office and supplied to patients for spitting purposes in the home.

283 spit bottles have been supplied for use outside the house.

An effort has been made to ascertain the sources of infection in Non-Pulmonary cases of Tuberculosis, and the most probable sources are shown in Table 12.

The localisation of forms of the disease other than Pulmonary is shown in Tables 8 and 9, which also show the age-grouping at different ages.

TABLE 8.

TUBERCULOSIS (OTHER FORMS)—CASES VISITED AND FILED DURING 1914.

Statistical Divisions		
City of Manchester		**1071**
I. Manchester Township		270
II. North Manchester		227
III. South Manchester		574
I.	Ancoats	97
	Central	40
	St. George's	133
II.	Cheetham	40
	Crumpsall	5
	Blackley	12
	Harpurhey	21
	Moston	15
	Newton	52
	Bradford	41
	Beswick	26
	Clayton	15
III.	Ardwick	75
	Openshaw	44
	West Gorton	57
	Rusholme and Kirkmanshulme	38
	Chorlton-upon-Medlock	110
	Hulme	117
	Moss Side	26
	Withington	10
	Levenshulme	28
	Gorton	69

TUBERCULOSIS (OTHER THAN PULMONARY).

TABLE 9.—CASES VISITED AND REGISTERED DURING 1914.

LOCATION OF DISEASE	AGE GROUPS																				Total		Manchester Township	North Manchester	South Manchester	Total
	0—		5—		10—		15—		20—		25—		35—		45—		55—		65—							
	M	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.				
Brain—																										
Tumour	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meninges	56	50	13	11	5	9	..	5	..	..	..	..	1	1	..	..	..	..	..	..	75	76	26	46	79	151
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Glands—																										
Cervical	21	23	44	34	40	50	26	23	5	12	10	11	4	4	1	2	1	..	..	..	152	159	80	69	162	311
Mesenteric	18	7	3	6	2	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	23	16	3	9	27	39
Axillary	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	2	2	2	..	2	4
Inguinal	1	..	1	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	4	1	1	2	2	5
Tuberculous Peritonitis	29	9	8	7	10	12	6	4	2	2	1	2	1	1	..	1	..	..	..	..	57	38	27	14	54	95
Tuberculosis of Abdomen	8	9	4	4	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	15	11	5	15	31
" Mediastinum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Pleura	..	..	1	..	1	..	..	..	..	..	1	..	3	..	1	..	..	..	..	..	7	..	2	..	5	7
" Breast	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Intestines	16	9	1	1	2	1	..	1	..	2	..	..	..	..	1	..	..	..	..	..	20	14	20	4	10	34
Joints—																										
Spine	8	2	8	5	5	9	6	3	1	3	2	2	..	2	2	..	1	..	..	..	33	26	15	13	31	59
Hip	7	2	3	8	4	3	7	5	5	3	8	4	3	..	2	..	1	..	..	1	40	26	15	8	43	66
Elbow	..	..	1	1	1	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	4	2	1	..	5	6
Ankle	..	3	..	..	3	1	..	..	2	1	..	..	1	..	1	2	..	..	2	..	9	7	2	3	11	16
Wrist	..	..	..	..	1	1	2	1	..	..	..	2	..	..	1	1	..	..	..	..	4	5	2	1	6	9
Shoulder	..	..	..	..	1	..	1	1	..	..	..	..	..	1	..	..	..	..	1	..	3	2	1	1	3	5
Knee	..	3	4	6	7	3	1	3	4	2	1	2	..	2	1	..	1	..	..	2	19	23	11	12	19	42
Bones—																										
Various	6	3	6	6	7	4	4	2	1	4	6	2	3	1	4	3	4	2	4	3	45	30	23	15	37	75
Tuberculosis of Skin	1	1	6	9	4	6	2	3	1	5	5	4	2	1	..	2	..	..	..	2	21	33	12	11	31	54
General Tuberculosis	9	5	2	2	4	..	..	1	..	1	..	..	..	1	..	..	..	1	1	..	16	11	7	6	14	27
Special Organs—																										
Tuberculosis of Ear	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Nose	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Bladder, etc.	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	..	..	2	2
" " Kidney	..	..	1	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	2	2	1	2	1	4
" " Testicle, etc.	1	..	..	..	3	..	..	..	1	..	2	..	8	..	..	..	..	..	2	..	17	..	5	3	9	17
" " Muscles, etc.	..	..	1	1	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	4	2	2	2	2	6
" " Pharynx, etc.	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
" " Rectum, etc.	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	2	1	1	1	1	3
Tuberculous Broncho-Pneumonia	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	2	2
Totals	182	126	108	101	107	102	58	53	23	41	37	31	27	16	14	12	11	4	10	8	577	494	270	228	573	1071

The information obtained as to the sources of the illness is given in the following tables :—

Table 10.

SOURCES OF INFECTION—PHTHISIS, 1914.

Cases other than those notified from the Workhouses.

Most Probable Source of Infection	Likely 1902-1914	1914			
		Likely	Less Likely	Possible	Total
Father	595	82	40	6	128
Mother	411	75	32	..	107
Brother	507	78	12	2	92
Sister	403	59	6	1	66
Husband	200	25	10	..	35
Wife	104	18	8	..	26
Uncle	119	17	5	..	22
Aunt	78	9	2	1	12
Son	75	3	1	1	5
Daughter	60	5	1	..	6
Grandfather	23	2	..	..	2
Grandmother	10	..	..	..	..
Nephew	17	..	..	..	..
Niece	11	2	3	..	5
Father-in-law	10	3	..	..	3
Mother-in-law	12	2	..	..	2
Son-in-law	4	1	..	..	1
Brother-in-law	84	5	4	..	9
Sister-in-law	55	6	2	..	8
Cousin	78	9	2	..	11
Relatives	154	64	30	..	94
Companion	576†	58	25	..	83
Neighbour	253†	37	17	..	54
Tenant (Landlady, etc.)	30	1	2	..	3
Lodger, Fellow-lodger	107	18	10	..	28
Patients, Hospital, etc.	20	4	2	..	6
Employer	30†	2	2	..	4
Workfellow	552†	53	41	..	94
Workplace or Work	228†	77	308	..	385
Houses (including public-houses, etc.)	135†	..	190	..	190
Milk or Food	37	1	22	3	26
Army	14	..	1	..	1
Early Infection	7	5	14	..	19
Railway Carriages	..	..	2	..	2
Schoolfellow	20	4	130	1	135
Monkey	1	..	..	..	..
Infected out of Manchester	..	..	..	..	91
Multiple Sources	..	..	..	..	573
Insufficient information	..	..	..	..	410
Total	5020	725	924	15	*2165

* This total does not include the 573 cases with Multiple Sources. † Twelve years.

TABLE II.

SOURCES OF INFECTION—PHTHISIS, 1914.

CASES NOTIFIED FROM THE WORKHOUSES.

Most Probable Source of Infection	Likely 1902-1914	1914			
		Likely	Less Likely	Possible	Total
Father	102	9	4	..	13
Mother	108	10	3	..	13
Brother	138	13	1	..	14
Sister	86	3	4	..	7
Husband	104	5	..	..	5
Wife	94	4	..	..	4
Uncle	15	1	1	..	2
Aunt	8	..	..	..	..
Nephew and Niece	29	..	..	..	..
Son	37	..	2	..	2
Daughter	24	1	1	..	2
Step-brother	2	..	..	..	..
Father-in-law	9	..	..	..	..
Mother-in-law	1	..	..	..	..
Son-in-law	3	..	..	..	..
Brother-in-law	20	1	..	..	1
Sister-in-law	18	..	..	..	..
Cousin	12	2	1	..	3
Relatives	21	7	5	..	12
Carried forward	831	56	22	..	78

CASES NOTIFIED FROM THE WORKHOUSES—*continued.*

Most Probable Source of Infection	Likely 1902-1914	1914			
		Likely	Less Likely	Possible	Total
Brought forward	831	56	22	..	78
Companion	291†	10	4	..	14
Schoolfellow	5	1	9	..	10
Neighbour	55†	4	2	..	6
Tenant (Landlady, etc.)	27	1	..	..	1
Lodger and Fellow-lodger	67	3	1	..	4
Employer	6	..	..	..	..
Workfellow.................	146	6	2	..	8
Workplace or Work	99	1	23	1	25
Houses (including public-houses, etc.)	260	..	208	..	208
Army......................	38	1	..	..	1
Milk or Food	10	..	..	..	..
Clothing, etc.	..	..	..	..	..
Asylum, Workhouse, etc.	52	16	5	..	21
Extension from Bone, etc., Disease	1	..	..	..	..
Infected out of Manchester....	..	..	..	..	12
Insufficient information	..	..	..	..	133
Multiple Sources	..	..	..	..	217
Total	1888	99	276	1	521*

* This total does not include the 217 cases with Multiple Sources.

† Twelve years.

TABLE 12.

PROBABLE SOURCES OF INFECTION AMONG CASES OF TUBERCULOSIS (OTHER THAN PULMONARY) VISITED AND REGISTERED DURING 1914.

Probable Source	Number of Cases
Father	70
Mother	46
Parents	5
Brother	14
Sister	15
Husband	3
Wife	1
Son	2
Grandfather	3
Grandmother	3
Uncle	20
Aunt	18
Cousin	4
Relatives (various)	38
Landlady, etc.	2
Lodger	13
Servant	1
Companion	23
Workfellow	5
Work-place or Work	41
School	88
Milk—Food	109
Public-house—Lodging-house	36
Asylum—Hospital	5
Neighbours	26
Inoculation	1
Early Infection	34
Infected outside Manchester	35
Source not ascertained	332
No information	78
Multiple Sources, including Milk*	25
Do. excluding Milk*	98
	1,071

* The 123 "Multiple Sources" are not included in the above total.

The following figures show the fate of patients treated in the Crossley Sanatorium and Clayton Vale Hospital for a number of years. That the results of treatment have not been better in the former institution must be ascribed to the comparatively late stage of the disease in many cases admitted. Clayton Vale Hospital, on the other hand, is intended to be used for comparatively advanced cases :—

TABLE 13.

DELAMERE SANATORIUM.

Males.

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1914
1905	16	1	0	10	3	3
1906	18	2	1	14	3	0
1907	29	2	1	20	4	4
1908	36	3	1	21	9	5
1909	27	4	2	13	6	6
1910	27	5	0	13	9	5
1911	38	2	0	15	7	6
1912	42	3	1	18	11	12
1913	151	3	0	25	32	94
1914	174	8	1	14	35	124
Total	558	33	7	163	119	259

Females.

1905	14	0	1	8	2	3
1906	14	1	0	10	3	1
1907	16	2	0	14	1	1
1908	13	3	0	11	1	1
1909	16	1	0	10	1	5
1910	11	4	0	6	2	3
1911	18	2	0	9	3	6
1912	25	3	0	5	8	12
1913	68	0	0	0	13	55
1914	69	4	0	1	19	49
Total	264	20	1	74	53	136

TABLE 14.

CLAYTON HOSPITAL.

Males.

Year	No. of new cases	No. of re-admissions	Died in the Hospital	Died elsewhere	Lost sight of	Known to be still living Dec. 31st, 1914
1904	20	0	3	16	1	0
1905	25	2	8	14	2	1
1906	40	3	6	29	5	0
1907	30	2	9	16	3	2
1908	31	2	9	16	5	1
1909	22	3	4	11	3	4
1910	37	1	5	12	9	11
1911	54	4	8	13	16	17
1912	54	4	6	10	11	27
1913	44	4	7	3	9	25
1914	80	6	14	6	4	56
Total	437	31	79	146	68	144

Females.

1905	20	0	6	11	0	3
1906	21	6	6	11	3	1
1907	27	4	9	12	4	2
1908	31	7	11	11	4	5
1909	24	3	14	7	1	2
1910	34	4	13	10	7	4
1911	88	5	14	22	19	33
1912	44	4	7	4	9	24
1913	65	5	19	4	10	32
1914	68	9	11	0	9	48
Total	422	47	110	92	66	154

The most serious difficulty with which we have to contend continues to be the late stage at which cases are first notified. The following table, prepared by Mr. Lock, relating only to deaths, will illustrate this difficulty.

The following facts are presented with reference to the *non-notification* of cases of Tuberculosis prior to death during 1914.

Letters were sent to the medical attendants concerned in all cases, excepting where a P.M. was held, asking why the cases were not notified :—

Location of Disease	Number of Cases not notified	Notified later as result of letter sent	No reply to letter sent	P.M. Cases (included in the first column)
Lungs (and Larynx) ..	55	12	21	12
Meninges	58	20	24	1
Intestines	28	8	12	2
Joints	7	3	2	..
Glands	5	1	2	..
Skin	1	1	..	..
General	11	2	2	4
Totals	165	47	63	19

In 55 cases explanatory replies were received. These fall generally into three classes, the reason for failure to notify being : (1) Overlooked ; (2) Did not know it was necessary ; (3) Diagnosis made too late for notification.

In the year 1914 a Care Committee was appointed to administer the money allotted by the City Council for the purpose of increasing the resistance of non-tuberculous persons in families invaded by Tuberculosis, and the sum assigned from the funds of the Local Insurance Committee for granting food to patients and clothing to persons treated in institutions, as well as to consider the steps which might be taken to secure employment for cases of Tuberculosis discharged from institutions.

The degree of the need existing will be seen from the following tables. In considering these tables it is necessary to remember that Mr. Rowntree's scale is now too low :—

TABLE 15.

TABLE SHOWING PARTICULARS OF DISTRESS IN CASES OF PHTHISIS NOTIFIED DURING THE YEAR 1914, CLASSIFIED ACCORDING TO THE REQUIREMENTS OF THE FAMILY IN EXCESS OF THE INCOME. FOOD CALCULATED ON THE ATWATER SCALE. HOUSEHOLD SUNDRIES CALCULATED ON MR. ROWNTREE'S SCALE.

Shortage UP TO......IN SHILLINGS.

Conditions affecting Individual Cases	−5	−10	−11	−12	−13	−14	−15	−16	−17	−18	−19	−20	−25	25+	Total
Alive December 31st, 1914	174	103	18	14	12	9	13	8	11	8	8	3	28	6	415
Dead December 31st, 1914	33	23	3	2	3	5	2	7	4	1	2	1	8	2	96
Removed to Union Hospital	20	21	5	..	6	5	..	4	5	1	3	1	10	3	84
Removed to Delamere Sanatorium ..	12	13	..	1	2	1	1	2	..	..	..	..	1	..	33
Removed to Bowdon	5	2	..	1	..	..	..	..	..	..	..	1	1	..	10
Removed to Clayton Hospital	15	3	2	1	2	1	1	1	..	..	1	..	3	..	30
Removed elsewhere	38	27	5	3	1	2	3	1	4	3	3	1	5	2	98
Remained at home..	117	60	9	10	4	5	10	7	6	5	3	1	16	3	256
Relief received	5	11	4	2	3	4	3	5	2	3	7	2	12	3	66

TABLE 16.

TUBERCULOSIS OTHER THAN PULMONARY. FROM CASES VISITED AND REGISTERED DURING 1914.

SHOWING SHORTAGE IN INCOME.

Circumstances affecting individual cases	Under 5/-	5/-	10/-	11/-	12/-	13/-	14/-	15/-	16/-	17/-	18/-	19/-	20/-	Tota
Alive December 31st, 1914 ..	84	42	4	6	6	2	2	2	4	3	4	1	12	172
Dead December 31st, 1914 ..	28	11	2	..	2	3	..	..	1	1	..	1	3	52
Removed to Union Hospital ..	19	12	2	2	3	1	..	1	3	4	2	1	6	56
,, Pendlebury	3	..	..	..	..	..	..	..	..	..	..	..	1	4
,, other Hospitals ..	28	12	3	2	1	1	1	1	..	..	1	..	2	52
Remained at Home	62	29	1	2	4	3	1	..	2	..	1	1	6	112
Received Relief..	4	3	4	1	3	2	..	1	1	..	1	..	5	25

THE SENIOR TUBERCULOSIS OFFICER'S REPORT.

By Dr. D. P. Sutherland.

In the report for 1913 a full description of the routine of dealing with tuberculous cases was given, and it has not been found necessary to modify the general methods described for providing treatment in any material degree.

It is not, therefore, proposed to do more than refer to points dealt with in that report to which particular attention may be directed with advantage.

It has been found convenient to continue the issue of Form Med. 2, and so obtain the diagnosis and detailed account of the disease from the Medical Practitioner, showing what treatment has been given, and ascertaining the Practitioner's views with regard to future treatment.

Some confusion still exists between Hospital and Sanatorium, the latter term being very frequently used to indicate an institution for an advanced case.

No great change is to be noted in the class of patient coming forward for examination.

The late notification of Tuberculosis continues to be one of the obstacles to a satisfactory campaign, and once more the attention of the profession is directed to the urgency and importance of recognising Tuberculosis at its earliest possible stage, and notifying at once.

The many cases of Chronic Cough, Anæmia, General Debility, Dyspepsia, Bronchitis, etc., that are seen and treated sometimes for very long periods before their true nature is ascertained, point to the necessity of the fullest investigation being made before the practitioner can be satisfied that this type of case does not possess a tubercular basis.

The testing of sputum for tubercle bacilli is of the greatest importance, but it leads often to the evil of a false sense of security, and the reason is that there is a tendency to place too much reliance upon a negative specimen. It cannot be too strongly urged that a single examination of sputum, if negative, is no justification for the assumption that the case concerned can be informed that there is nothing to fear and that Tuberculosis does not exist. Unless examinations of sputum are made frequently, and with the total amount available, advantage also being taken of other laboratory methods, early cases will very frequently indeed be missed. A progressing case—*i.e.*, one giving rise to symptoms—must be expected to part with tubercle bacilli at some time; but it is erratic, and experience shows the variability from day to day in the sputum from any one case.

In all difficult and doubtful cases the services of the Tuberculosis Officers are at the disposal of practitioners. The facilities offered for assistance in diagnosis are taken advantage of to a certain extent, and during the year under review 118 consultations were held with practitioners at their surgeries or the houses of patients. In addition, about 200 cases were sent for special examination, but one would like to see many more cases referred in this way.

The situation in respect of domiciliary treatment does not improve. Reference was made previously to the unsatisfactory condition existing, and brought about by the absorption of the 6d. intended for the domiciliary treatment of Tuberculosis into the general pooled sum for all medical treatment. At the end of 1914 there were approximately 300,000 insured persons in the Manchester area. It is of interest to note that the sum available at 6d. per insured person amounts to a total of £7,500 a year.

The number of insured cases receiving domiciliary treatment is about 700. Accordingly a sum of over £10 per annum should be available for each of these domiciliary cases, a sum quite adequate to pay for the home treatment by practitioners. As it is, however, the doctor in charge of a number of tuberculous cases does not receive any specific sum in respect of them, but is simply paid on the established basis for all cases, and so the remuneration received for Tuberculosis is lost sight of, and, indeed, is helping to pay for treatment of all cases. The total sum available to the profession remains the same ; it is simply that the distribution of a part of it should be readjusted in accordance with the original intention of the Act.

Until this is done a large measure of control in the treatment of Tuberculosis is sacrificed to the detriment of both doctors and patients.

In April, 1914, Abergele Sanatorium was taken over by the Corporation, and additional accommodation was thereby obtained for 46 early cases of Phthisis and for 9 cases of Surgical Tuberculosis in children. The South Manchester Guardians have the right to recommend cases for Abergele, and, provided that the pulmonary ones are incipient, they are accepted for admission. Unfortunately the majority of cases so recommended are long past the early stages, and only a limited number therefore are eligible.

The treatment of children suffering from Tuberculosis in its various forms cannot be regarded as satisfactory, on account of the insufficient provision for institutional care.

The general hospitals are naturally unwilling to take in either infectious cases or those requiring, perhaps, 18 months' continued treatment. Out-patient treatment does not suffice for them, and accommodation is necessary on an adequate scale to meet the requirements.

At present the demand for beds at Clayton is great, and only a very limited number of the children requiring treatment and institutional care can be admitted there and to the Abergele beds mentioned.

There is also need for more hospital beds than are at present provided, but this requirement will be met when the additional accommodation at Baguley is complete. To obtain the best results, however, a much longer stay in institution is requisite, and it is unreasonable to expect that the very gross lesions met with can be permanently benefited by a short course of treatment. It is fully admitted that surgical cases, often of less extent and more favourably situated in regard to the provision of immobility, require a period of treatment of one or two years. What is not so often recognised is that a comparable time must be allowed for pulmonary cases, and this necessitates ample accommodation, powers of compulsory removal and detention, and often after-care in a colony.

The results obtainable in even fairly advanced cases are encouraging, and the improvement seen in the Baguley cases justifies the expectation of still better things if the above conditions could be obtained. The induction of artificial pneumothorax being carried out at Abergele has as yet had too short a trial to justify any conclusions being drawn as to the ultimate results. But there is reason to believe that in the selected number of cases it will prove a valuable additional mode of treatment.

In respect of the clinical work a large extension of this has been made possible by the appointment of two Assistant Tuberculosis Officers, Dr. R. Briercliffe and Dr. A. B. Porteous. Their work has been directed largely to the examination of contacts and the treatment of cases at Hardman Street Dispensary. At the commencement of the War, Dr. Briercliffe's services were requested as Sanitary Officer to the troops going abroad, and from that time the staff has been accordingly reduced.

The following table gives an analysis of cases examined during 1914; and refers only to primary examinations.

Cases that had been kept under observation have been re-examined at intervals of one, three, or six months, and in all this has accounted for a total of 2,418 examinations and 667 visits.

SUMMARY OF CASES EXAMINED BY THE SENIOR TUBERCULOSIS OFFICER AND ASSISTANT TUBERCULOSIS OFFICERS IN 1914.

	Reason for Examination				Occupational Condition at Examination		Diagnosis													Recommendations made							
							Pulmonary Tuberculosis			Tuberculosis of																	
	Treatment	Claimed Recovery	Diagnosis	Contacts	Working (or at School)	Not Working	Stage I.	Stage II.	Stage III.	Larynx	Bones and Joints	Glands	Abdomen	Other Organs	Doubtful Tuberculosis	Bronchitis	Heart Lesions	Other Diseases	No evidence of Tuberculosis	Delamere and Abergele	Clayton	Baguley	Hardman Street Dispensary	Union	Other Hospitals	Private Practitioners	Observation
Males ..	328	79	106	38	265	286	83	105	213	24	29	21	13	16	56	85	14	52	59	51	14	189	49	14	25	129	80
Females	288	134	78	67	380	187	94	97	193	12	25	23	10	3	48	89	17	80	76	46	36	116	115	17	35	116	86
Children	231	194	33	329	420	367	111	118	161	3	13	122	29	4	118	194	11	72	126	20	190	14	274	8	86	46	149
	1,905				1,905															1,905							

Where a case is suffering from two or more forms of disease, an entry is made in the columns appropriate to the disease; one case may, therefore, appear in more than one column.

The number of cases examined in whom other forms of Tuberculosis than Phthisis existed, and where no evidence of pulmonary disease was demonstrable, was 81. In the majority of tuberculous cases seen, lesions of the lungs were found in addition to the disease elsewhere.

The most frequent sources of difficulty in diagnosis, as evidenced by the fact that they occurred amongst cases notified to be suffering from Phthisis, were Bronchitis, Unresolved Pneumonia, Pneumonokoniosis, Cardiac Disease, Diseases of the Nose and Throat, Anæmia, and Dyspepsia. In addition to these, all the following were responsible for a diagnosis of Tuberculosis:—

Abscess of Lung
Aortic Aneurism
Atheroma
Carcinoma of Liver
Empyema
Endothelioma Lung
Gastric Ulcer
Gastric Carcinoma
Nephritis
Plumbism
Rickets
Sarcoma of Hip
Sarcoma of Lung
Syphilis of Lung and Larynx
Spina Bifida
Thyroid Adenoma
Whooping Cough

The work done in respect of Sanatorium Benefit under the Insurance Act has steadily increased, and the number of cases coming under review each month is shown below:—

1914	New Applications	Reconsidered Cases
January	107	286
February	115	269
March	94	300
April	94	374
May	103	258
June	80	415
July	100	303
August	76	356
September	84	343
October..	74	474
November	71	384
December	57	431

The following return of insured persons dealt with gives a summary of the year's work in this direction :—

SANATORIUM BENEFIT RETURN.

TABLE I.—Showing the number of insured persons applying for Sanatorium Benefit, and of insured persons receiving Sanatorium Benefit during the period from 12th January, 1914, to 31st December, 1914, inclusive.

N.B.—In this table a person who received treatment within the period should appear once, and once only, even though he has received treatment in more than one form. A person whose course of treatment began prior to 12th January, 1914, and continued into the period should NOT appear in this table.

	Number of Applicants		Not recommended for reasons other than those of health, *e.g.*, applicant not insured	Not treated for reasons such as those stated in footnote*	Received Treatment†		
	(*a*) Whose applications were received before 12th Jan., 1914, but who did not receive treatment till on or after that date	(*b*) Whose applications were received during the period			(*a*) Pulmonary Cases	(*b*) Non-Pulmonary Cases	(*c*) Total
Men	44	711	..	65	642	48	690
Women ..	17	318	..	28	273	34	307
Totals ..	61	1,029	..	93	915	82	997

* (i) On expert examination found not to be suffering from Tuberculosis.
(ii) Removed to another area.
(iii) Declined the treatment for which nominated.
(iv) Application under consideration on 31st December, 1914.

† These figures should include all of the applicants included in the left-hand columns (*a*) and (*b*) who received treatment during the period.

TABLE II.—Showing the number of cases of Tuberculosis receiving treatment in various forms during the period from 12th January, 1914, to 31st December, 1914, inclusive.

N.B.—A person receiving treatment under more than one heading should appear in this and the following table as a separate case under each heading. A person nominated more than once for the same form of treatment should, however, be reckoned as one case only of that form of treatment. A person whose treatment began before 12th January, 1914, and continued into the period should be included in this and the following table.

	Men	Women	Total
Residential	654	209	863
Dispensary	482	165	647
Domiciliary	942	386	1,328
Totals	2,078	760	2,838

TABLE III.—ANALYSIS OF CASES.

(a) *Residential.*

	Total cases treated	Discharged from Institution		Died	* Residential treatment discontinued in other cases	Still under Residential treatment on 1st January, 1915
		Improved	Without Improvement			
	(1)	(2)	(3)	(4)	(5)	(6)
Men	654	346	38	55	48	167
Women	209	109	14	12	11	63
Totals.. ..	863	455	52	67	59	230

* The figures in column (5) should relate to cases as to the progress of which no definite report is available for various reasons—*e.g.*, the withdrawal from the institution of the insured persons themselves before the expiration of the period for which they were nominated for the treatment.

(b) *Dispensary.*

	Total cases treated	Discharged from Institution		Died	* Residential treatment discontinued in other cases	Still under Dispensary treatment on 1st January, 1915
		Improved	Without Improvement			
	(1)	(2)	(3)	(4)	(5)	(6)
Men	482	232	120	4	42	84
Women	165	72	31	1	17	44
Totals.. ..	647	304	151	5	59	128

* See footnote to Table III. (*a*), column (5).

In respect of insured patients, the amount of money—£500—set aside for the provision of food and clothing has proved of great use. Grants are only made after full investigation into the circumstances of the family, and conditions are imposed that the instructions given in regard to the taking of precautions and following of advice shall be carried out.

Food was granted in 664 cases to 315 patients—*i.e.*, some patients had more than one grant during the year—and clothing was supplied in 204 cases to 174 patients.

To a limited extent also bedsteads and bedding have been lent in order to secure more satisfactory isolation at home, and this is a provision that could usefully be extended.

An important addition to the work has been made possible by the appointment of two Tuberculosis Nurses. Acting upon the instructions of the Tuberculosis Officer, they visit patients at their homes regularly, advise in respect of nursing, diet, and general management, and report upon the conditions of the household. They urge the necessary precautions, and follow up cases to see that they are observed, and where the health of other members of the family does not appear to be satisfactory steps are taken to provide for examination and treatment if needed.

The table following gives an indication of the work done by them :—

A Summary of Work done by the Tuberculosis Nurses, April—December, 1914.

Visits						Disposal of Sputum		Home Conditions					Sleeping Accommodation				Patients removed to Hospitals or Sanatorium	Deaths	Sick Contacts Referred			Total visits paid
								At first visit			Re-sult											
Primary	Special Inquiry	*Re* Sanatorium Benefit	*Re* Attendance on Doctor	*Re* Attendance at Dispensary	Ordinary visits to give advice and instruction	Careless at first visit	Improved	Dirty	Overcrowded with furniture, etc.	Bad ventilation	Improved	Sanitary Defects	Patient sleeping with one person	With more than one	Isolated as result of visit	Beds lent			Tubercular	Non-Tubecular	Total number examined and treatment provided	
954	120	24	356	153	301	94	86	116	26	53	93	22	54	33	24	17	47	70	13	56	69	2094
							(3 dead, removed to Hospital or lost sight of—5 remain)				(11 dead, removed or in Hospital—6 remain)	All attended to		In one case a family of 7, including 2 patients, were sleeping in one bed. They have now 3 beds, and patients are isolated								

Referred for Grants of Nourishment and Relieved			Instructions in Cooking	Advised to apply for Relief
Number to whom Grants made	Improvement in Patient	Improvement in Home conditions		
89	29	36	78	54

The final tables relate to the Local Government Board Return for the year :—

I.—DISPENSARY RETURN.

Number of persons, including contacts, who were examined for the first time during the period from 12th January, 1914, to the 31st December, 1914, at or in connection with the dispensary or visiting station and were :—					Number of persons diagnosed to be suffering from tuberculosis who were treated or supervised at or in connection with the dispensary or visiting station during the period from 12th January, 1914, to the 31st December, 1914		Number of persons who were under treatment, supervision, or observation at or in connection with the dispensary or visiting station on 31st December, 1914	
Diagnosed as suffering from tuberculosis	Diagnosed as not suffering from tuberculosis	Undiagnosed and remaining under observation	Total number examined					
			Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
1,808	859	241	984	1,924	623	1,140	128	620

(including Observation Beds at Dispensaries).

	NAME AND SITUATION OF INSTITUTION	Number of beds available for patients sent by the Council	Number of patients who were sent by the Council during the period from 12th January, 1914. to 31st December, 1914		Number of patients sent by the Council who were discharged from or died in the Institution during the period from 12th January, 1914, to 31st December, 1914		Total number of days during which the patients referred to in Columns 6 and 7 were resident in the Institution		Number of patients sent by the Council who were under treatment on the 31st December, 1914		Number of insured persons and dependants of insured persons maintained by the Insurance Committee, otherwise than through the Council, in the Institution on the 31st December, 1914	
			Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured persons	Dependants
A. Adults	Baguley Sanatorium, Timperley, Cheshire	148	303	49	293	54	33,513	6,417	121	16	..	..
	Crossley Sanatorium, Frodsham, Cheshire	62	226	19	220	14	17,666	1,243	58	4	..	..
	Abergele Sanatorium, Plas Uchaf, Abergele, North Wales	46	111	23	73	19	6,560	3,082	38	4	..	..
	Clayton Vale Hospital, Newton Heath, Manchester	41	30	33	22	41	970	6,024	8	9	..	..
	Manchester Royal Infirmary, Oxford Road, Manchester	4 before June, 1914 none since	1	1	1	1	20	21	..	..	..	..
B. Children Under 16 years	Baguley Sanatorium, Timperley	No definite number	..	10	..	12	..	1,727	..	6	..	..
	Abergele Sanatorium, Plas Uchaf	..	..	7	..	3	..	380	..	4	..	..
	Clayton Vale Hospital, Newton Heath	26 For children under 12	..	103	..	99	..	16,932	..	44	..	..
	Totals	327	671	245	609	243	58,729	35,826	225	87	..	..

III.—Residential Institutions for the Treatment of Non-Pulmonary Tuberculosis.

	NAME AND SITUATION OF INSTITUTION	Number of beds available for patients sent by the Council	Number of patients who were sent by the Council during the period from 12th January, 1914, to 31st December, 1914		Number of patients sent by the Council who were discharged from or died in the Institution during the period from 12th January, 1914, to 31st December, 1914		Total number of days during which the patients referred to in Columns 6 and 7 were resident in the Institution		Number of patients sent by the Council who were under treatment on the 31st December, 1914		Number of insured persons and dependants of insured persons maintained by the Insurance Committee, otherwise than through the Council, in the Institution on the 31st December, 1914	
			Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured persons	Dependants
A. Adults	Manchester Royal Infirmary, Oxford Road, Manchester	*20	64	4	58	4	1,990	214	6	..	..	..
B. Children Under 16 years	Abergele Sanatorium, Pen-y-coed, Abergele, North Wales	9	..	14	..	5	..	889	..	9	..	..
	Manchester Royal Infirmary, Oxford Road, Manchester	Included under A	..	1	..	1	..	14	..	..	..	..
	Totals	29	64	19	58	10	1,990	1,117	6	9	..	..

* If required.—Actual number at any time varies with applications.

If we take the number of insured cases examined, we find it is 984; all these are notified cases of Tuberculosis, and only a small number of them are found to be non-tubercular subsequently.

Of this number, 623 received treatment at the Dispensary for a longer or shorter time. The number at one time under treatment there is seen to be 128.

In regard to uninsured cases, 1,924 were examined and 859 were found to be non-tubercular. The number of tubercular uninsured cases therefore examined for the first time was 1,005. A certain number of the remaining 859 cases referred to were under treatment or supervision for a time, hence the figure 1,140 as the number of uninsured cases treated. The number of uninsured cases under treatment at one time is seen to be 620.

The different relationships of treated to examined cases amongst insured and uninsured patients is explained by the Manchester system of medical service as distinct from the Panel system which obtains elsewhere. The tendency under the latter method of giving treatment is for a larger proportion of cases to receive attention at the Dispensary; here the system tends to keep patients under domiciliary care.

MILK AND TUBERCULOSIS.

Manchester farms number 62, and have on them 221 cowsheds.

The total number of cows kept within the City is about 1,006, the maximum accommodation being somewhat higher.

The Manchester Milk Clauses.

No material change took place in the method of administration of these Clauses of the Manchester General Powers Act, 1899, during the first eight months of the year, though from September onwards it became difficult to carry on the necessary examinations owing to the absence of Lieut. Brittlebank on Military Service.

Tuberculous Milk.

During the year 397 samples of milk have been collected by the Food and Drugs Inspectors in connection with Tuberculosis. Of this number, 374 were collected at the railway stations, and the remaining 23 from carts coming in by road. The number of farmers represented in the total is 352.

Of these 352 farmers, 226 reside in Cheshire, and 28 of them (12·39 per cent.) sent tuberculous milk; 61 live in Derbyshire, and 5 of them (8·19 per cent.) sent tuberculous milk; 29 live in Staffordshire, and 0 of them sent tuberculous milk; 36 live in Lancashire, and 1 of them (2·77 per cent.) sent tuberculous milk.

The usual table showing the percentage of farmers found sending tuberculous milk from 1901 onwards is inserted, being completed to the end of the year 1914.

TABLE I.

YEAR	Number of farmers' milk tested during the year	Total number found to cause Tuberculosis in the experimental animal	Percentage of farmers sending Tuberculous milk	Percentage of farmers from EACH COUNTY whose milk was found to cause Tuberculosis.					
				Cheshire	Derbyshire	Staffordshire	Shropshire	Lancashire	Yorkshire
1901	272	27	9·9	10·46	9·23	8·00	10·00	...	...
1902	345	36	10·4	12·72	8·65	4·01	...	8·31	...
1903	329	45	13·6	14·76	9·58	15·15	40·00	...	...
1904	318	29	9·1	11·17	6·02	...	...	7·14	25·00
1905	565	47	8·3	10·26	6·00	6·38	...	2·98	12·50
1906	542	42	7·7	8·60	6·50	9·30	12·50	4·0	...
1907	562	38	6·76	7·71	4·48	6·94	12·50	3·70	...
1908	289	27	9·34	11·56	6·25	7·70	...	2·94	12·50
1909	535	31	5·79	4·80	7·47	8·57	11·11	3·33	...
1910	468	30	6·41	6·20	8·69	5·55	...	...	...
1911	494	51	10·32	11·11	2·5	12·12	100·0	12·20	50·00
1912	484	54	11·15	13·94	4·0	10·20	33·33	6·00	10·00
1913	486	60	12·51	13·99	11·58	9·26	33·33	5·88	20·00
1914	352	34	9·66	...	...	...	...	...	...
Total..	6041	551	9·12	—	—	—	—	—	—

From the particulars supplied by farmers, 283 of whom replied to our queries, we find that on these farms there were 5,650 cows, or an average of 19·96 cows per farm.

Tuberculin Test.

A table given in the Annual Report for the year 1913 shows the successful manner in which the work of keeping a herd free from Tuberculosis is being carried on. The milk produced by this herd is supplied to Monsall Fever Hospital, Clayton Hospital, and the Baguley Sanatorium.

Much of the credit for a notable piece of work is due to Mr. F. T. Walley, the farmer concerned, whose ready co-operation has at all times been of the greatest assistance.

The following table of samples submitted in connection with the Manchester Milk Clauses summarises the work of the year :—

TABLE II. 1914.

Number of specimens of mixed milk taken at the station	358	
Number of specimens of mixed milk elsewhere	23	
Number of each found to contain tubercular infection	Station 34 Elsewhere 10	In addition, 16 control samples were taken at the stations and elsewhere, of which 7 were proved capable of causing tuberculosis.
Number of farms visited in consequence	42	Including 1 visited as result of notification or otherwise. Total visits 43.
Number of specimens taken from individual cows as result of following up station and other samples	88	And 8 mixed samples.
Number of milks from individual cows proved to be tuberculous out of those given in the preceding column	28	And 2 mixed samples.
Number of udders proved to contain tuberculous lesions	23	
Number of milks taken from individual cows as the result of *notification* or *otherwise* than owing to the presence of tubercle bacilli in mixed milk	...	
Number of udders in last column shown to be tuberculous by bacteriological examination	...	
Total number of specimens submitted for examination	493	

DAIRIES, MILKSHOPS, AND ICE-CREAM SHOPS.

By Dr. W. A. Young.

During 1914 there has been an improvement in the cleanliness of the "Milkshops" within the City, and close attention to the covering of the milk vessels is being observed.

The work of inspection has been carried out by Inspectors Greenup and Sayle (who was appointed in July, 1914), and supervised by Dr. Young.

As the result of the appointing of an additional Inspector, more regular inspections are now possible, and a systematic examination of all milkshops in the various districts has been started, and several defects, long overlooked, are receiving attention.

Some of the premises occupied by dairymen carrying on extensive businesses, involving the storage of large quantities of milk, have been brought more up-to-date, and other similar premises are being dealt with.

The small retail milkshops—the most prevalent type in the City—are in a great many instances unsuitable for the storage and sale of milk, but unfortunately they are mostly old-established businesses and difficult to deal with.

The stocking of these small shops with such commodities as groceries, hardware, tobacco, drapery goods, dusty firelighters and holystones, does not tend to make them suitable for the storage and sale of milk. A fact which many people have not yet realised.

The sale of milk should be permitted only from premises which have been specially adapted for the purpose, and where the other articles for sale are truly compatible with the sale of milk, *e.g.*, dairy produce, confectionery, small tinned, bottled, or packet goods, and mineral waters.

In such a shop milk is not a side-line and of secondary consideration, as is too often the case in the existing small milkshops in Manchester.

The following table shows the work done during 1914 :—

Number of Milkshops on the Register..	2,976
Visits by Inspectors..	4,168
Visits paid by Medical Staff	134
Number warned to Register	286
Number found without Indicator over the door.. ..	172
Vessels uncovered	56
Dirty Milkshops	413

Letters sent re *Greengroceries.*

First letter	80
Second letter	13
	93

Results.

Sale of Milk discontinued	20
Sale of Greengroceries discontinued	57
Satisfactory arrangements	3
	80

Prosecutions.

Dirty Milkshops	17
No Indicator over door	10
Dirty Milk	1
Unregistered	2
	30

Removed (summons not served)	1
Letters sent by Committee	2

Ice Cream.

Ice-cream shops and ice-cream-making depôts are under the supervision of the Milkshops Inspectors, who visit those premises regularly and see that the requirements of the Medical Officer of Health are carried out :—

Ice Cream.

Inspections	729

Defaults.

Warned to cleanse premises	62
Boiled mixture uncovered	25
Premises in state of disrepair	20
Defective ashboxes and ashbins	11
Dirty clothing	4

Prosecutions.

Premises unfit	3

The following return summarises the action taken in the City of Manchester under the Public Health (Milk and Cream) Regulations, 1912 :—

REPORT FOR THE YEAR ENDED 31ST DECEMBER, 1914.

1. Milk and cream not sold as preserved cream :—

	(*a*) Number of samples examined for the presence of a Preservative	(*b*) Number in which a Preservative was reported to be present
Milk	1,233	..
Cream	..	..

Nature of preservative in each case in column (*b*), and action taken under the Regulations in regard to it.

2. Cream sold as preserved cream :—

(*a*) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct :—

(I.) Correct statements made	66
(II.) Statements incorrect	18
Total	84

(*b*) Determinations made of milk fat in cream sold as preserved cream :—

(I.) Above 35 per cent...	28
(II.) Below 35 per cent...	..
Total	28

(*c*) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed.

(*d*) Particulars of each case in which the Regulations have not been complied with, and action taken.

3. Thickening substances: Any evidence of their addition to cream or to preserved cream. Action taken where found.

4. Other observations, if any.

Answer to questions :—

2 (*c*) and (*d*) :—

In 18 cases the samples obtained were labelled as preserved cream, but on analysis no preservatives were found.

3 and 4 :—

None.

WORK DONE IN CONNECTION WITH STABLES, RESTAURANT KITCHENS, and FOOD SHOPS.

Report from September, 1914, to the end of the Year.

By Dr. W. A. Young.

Number reported upon by Inspectors	99

Number visited by the Medical Officer of Health or members of his staff ..	60
Number waiting to be visited	35
Number disused as stables (no notices sent)	4
	99

Notices served to repair stables and reconstruct manurestead..	53
Notices served to remove and discontinue keeping animals..	7
	60

Number of Prosecutions for non-compliance with Bye-laws for removal of horse manure from January, 1914, to December, 1914	9

In order to place the stable premises of the City in a sanitary condition, and at the same time to reduce possible breeding grounds for flies, much work has been done.

The notices served are principally to thoroughly repair the stable premises, taking away all defective and saturated woodwork, reconstructing defective drains, floors, and stable yards, and to provide satisfactory means for lighting and ventilation.

It is also necessary to provide receptacles for manure of such a character as to prevent the lodgment of the larvæ and pupæ of the housefly, and of such size as to secure frequent removal of the manure.

RESTAURANT KITCHENS.

In the City of Manchester there are, large and small, about 350 restaurant kitchens. The vast majority of these kitchens are situated underground, and inspections which have been made from time to time have shown that the conditions under which the preparation of food is carried on are in many cases extremely unsatisfactory. It was evident that something more than a passing inspection was needed, and that considerable time and care must be expended if satisfactory results were to be obtained. Special attention was therefore given to the matter during the year, and the restaurant kitchens in the City are now being systematically dealt with.

The procedure adopted is as follows :—A preliminary inspection and report is made by one of the Inspectors ; subsequent visits are made by Dr. McClure, who suggests the steps which are necessary in order to make the premises suitable for the purpose for which they are used ; a specification of the work required is then prepared by Mr. Irvine in the Surveyor's Department, and sent to the owners and occupiers of the property. Dr. McClure then interviews the owners or agents and tenants, and each case is followed up until the work has been completed to the satisfaction of the Medical Officer of Health.

The objects aimed at are the provision of ample lighting and ventilation, of impermeable, easily cleansed surfaces to the walls and floors, and of a proper system of drainage, with the drain inlets, if practicable, placed outside the building in specially-constructed areas. Other matters receive attention, and to make these improvements has in some cases necessitated extensive alterations, which have as a rule been satisfactorily carried out by the owners concerned.

Since the middle of the year 54 kitchens have been dealt with in this way. In 14 the alterations have been completed, in 35 the work is in progress, and in 5 cases the restaurants have been closed altogether. Progress is being made, and it will be possible to deal more completely with the results obtained in a subsequent report.

FOOD SHOPS.

Attention has been given particularly to the premises of pork dealers, where the preparation of tripe, sausages, meat pies, and so forth is carried on in the basement under unsuitable conditions. Apart from routine inspection, 18 of such premises have been dealt with, and alterations according to the specification sent out by the Medical Officer of Health have been completed in 11, and are in progress in 7.

Annual Report of the Medical Officer of Health for the year 1914, for the County Borough of Manchester, on the administration of the Factory and Workshop Act, 1901, in connection with

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

1.—INSPECTION OF FACTORIES, WORKSHOPS, AND WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises	Number of		
	Inspections	Written Notices	Prosecutions
Factories (including Factory Laundries)... ...	13867	389	3
Workshops (including Workshop Laundries)...			
Workplaces (other than Outworkers' premises included in Part 3 of this Report)			
Total	13867	389	3

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, AND WORKPLACES.

Particulars	Number of Defects			No of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
*Nuisances under the Public Health Acts:—**				
Want of cleanliness	558	558	...	1
Want of ventilation	11	11	...	...
Overcrowding	2	2	...	...
Want of drainage of floors	1	1	...	...
Other nuisances	83	83	...	...
Sanitary accommodation—				
Insufficient	40	17	...	...
Unsuitable or defective...	104	84	...	1
Not separate for sexes	9	3	...	...
Offences under the Factory and Workshop Act:—				
Illegal occupation of underground bakehouse (S. 101)	...	...	...	...
Breach of special sanitary requirements for bakehouses (SS. 97 to 100) ...	165	165	...	1
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	74	74	...	...
Means of escape in case of fire (insufficient)	49	20	...	...
Total	1096	1018	...	3

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* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshops Act as remediable under the Public Health Acts.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year		Number
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Workshops	4110
	Bakehouses	560
	Total number of Workshops on Register	4670

5.—OTHER MATTERS.

Class	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	287
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5)—	
Notified by H.M. Inspector	93
Reports (of action taken) sent to H.M. Inspector	93
Other	82
Underground Bakehouses (S. 101) :—	
Certificates granted during the year	...
In use at the end of the year	35
Not in use at the end of the year	15

NOTE.—The Factory and Workshop Act, 1901 (S. 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, workplaces, or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

I append a brief Statement on the Memorandum of the Home Office upon the Structural requirements of the Factory and Workshop Acts, as to

1. Means of escape from fire:

Bye-laws have been in operation since 1908. These have been amended, and in their amended form were approved by the Local Government Board in 1913.

A large amount of work has been done under these bye-laws, and practically the whole of the factories and workshops have been dealt with.

3.—HOME WORK.

NATURE OF WORK *	Outworkers' Lists, Section 107.									Outwork in Unwholesome Premises, Section 108			Outwork in Infected Premises, Sections 109, 110		
	Lists received from Employers						Notices served on Occupiers as to keeping or sending lists	Prosecutions		Instances	Notices served	Prosecutions	Instances	Order made (S. 110)	Prosecutions (Sections 109, 110)
	Sending twice in the year			Sending once in the year											
	Lists †	Outworkers †		Lists	Outworkers			Failing to keep or permit inspection of lists	Failing to send lists						
		Con-tractors	Work-men		Con-tractors	Work-men									
Wearing Apparel—							A Notification sent with a blank list to each Employer twice a year								
(1) Making, etc.	870	666	4702	30	17	102		..	5	1	1	..	..	..	..
(2) Cleaning and washing ..	2	..	2	..	..	..		..	..	..	..	..	..	..	..
Household linen	..	..	..	1	..	1		..	..	..	..	..	..	..	..
Lace, lace curtains, and nets	4	..	12	..	..	..		..	..	..	..	..	..	..	..
Curtains and furniture hangings ..	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Furniture and upholstery	12	6	26	1	..	1		..	..	..	..	..	..	..	..
Electro-plate	..	..	..	..	..	..		..	..	..	..	..	..	..	..
File making	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Brass and brass articles	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Furriers	4	..	29	..	..	..		..	..	..	..	..	..	..	..
Cables and chains	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Anchors and grapnels	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Cart gear	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Locks, latches, and keys	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Umbrellas, etc.	40	16	530	2	..	5		..	..	..	..	..	..	..	..
Artificial flowers	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Nets, other than wire nets	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Fents	4	..	23	..	..	..		..	..	..	..	..	..	..	..
Quilts	8	..	40	..	..	..		..	..	..	..	..	..	..	..
Gold beaters	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Paper, etc., boxes, paper bags ..	6	..	20	..	..	..		..	..	..	..	..	..	..	..
Window blinds	2	..	2	..	..	..		..	..	..	..	..	..	..	..
Sponges	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Hair pads	2	..	2	1	..	2		..	..	..	..	..	..	..	..
Carding, etc., of buttons, etc. ..	2	..	8	..	..	..		..	..	..	..	..	..	..	..
Opticians	2	2	..	..	..	..		..	..	..	..	..	..	..	..
Handkerchief hemmers	42	1	411	2	..	15		..	1	..	..	..	..	..	..
Chocolates and sweetmeats	..	..	..	..	..	..		..	..	..	..	..	..	..	..
Total	1000	691	5807	37	17	126		..	6	1	1	..	..	..	..

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* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the ist should be included among those in column 2 (or 5 as the case may be) against the principal class *only*, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into heir respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3, and 4 are the *total* number of the lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be *even* numbers, as there will be two lists for each employer—in some previous returns odd numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

.951 visits were paid to houses of outworkers during the year.

2. Sanitary accommodation:

Although the work has not been carried out under the Sanitary Accommodation Order, 1903, the conditions stated in the memorandum have been enforced, and all the factories and workshops have been dealt with, although changes are constantly occurring.

3. Provision of lavatories:

This matter is dealt with by His Majesty's Inspector of Factories and Workshops.

4. Meal rooms are also dealt with in the same manner, although in a few instances these have been provided at the suggestion of the Corporation officials.

5. General ventilation. *See* return already sent to Home Office.

6. Air space. *See* Overcrowding, same return.

7. Floor space. We have no workshops to which this section applies.

8. Lighting. This matter has received attention, but no special record has been kept.

9. Temperature. This has been dealt with only in so far as 5 is concerned.

10. Wet floors. This is dealt with, but cases are infrequent.

11. Walls and ceilings. The requirements are systematically carried out, but the attention of the Inspectors will be specially called to the possible accumulation of dust.

12. Stability of buildings. This receives attention from the Special Department concerned.

13. Basements are discouraged. New ones are refused, or specifications are made out.

Engines, etc. This would come under His Majesty's Inspector of Factories and Workshops.

HOUSING OF THE WORKING CLASSES.

In the Annual Report for the year 1912 the procedure of the Housing Sub-Committee is fully given, and need not be repeated here.

Table 1 summarises the detailed work carried out by the Housing Sub-Committee from the beginning of their operations in 1885 in the respective Sanitary Districts of the City.

Table I.—Showing the Number of Houses Certified to, and Dealt with by the Committee on the respective Districts from February, 1885, t December 31st, 1914:—

District		Number Certified	Number of Houses added together or to other Houses	Number Demolished	Number Repaired and Reopened	Number Closed	Number not Closed	Number which stand Adjourned
Central..	1	788	140	252	224	112	60	..
	2	1,650	174	733	546	124	71	2
	3	1,727	366	432	500	223	206	..
Cheetham	4	527	18	73	413	23	..	..
	5	77	4	5	64	4	..	..
St. George's.. ..	6	2,205	289	855	756	263	42	..
	7	1,351	119	452	688	47	45	..
	8	383	55	47	239	15	27	..
Ancoats (Part of).	9	2,689	388	703	1,191	97	303	7
,, ,, .	10	1,245	232	378	498	21	103	13
Beswick	10	80	8	6	38	2	26	..
Ancoats (Part of).	11	1,132	267	314	506	21	24	..
Ardwick (Part of).	12	1,197	195	302	531	63	106	..
,, ,,	13	354	6	23	285	2	38	..
C.-on-M.	13	183	18	19	134	6	6	..
	14	1,522	140	418	780	64	112	8
	15	1,749	247	315	924	60	203	..
Hulme	16	1,488	25	71	1,209	16	161	6
	17	2,016	140	304	1,377	49	144	2
	18	1,794	211	522	953	44	64	..
Crumpsall	19	75	25	10	32	8	..	..
Blackley	20	227	13	33	134	17	30	..
Harpurhey	20	57	2	13	6	..	36	..
Moston..	21	20	..	9	8	3	..	..
Newton	22	416	101	112	193	5	5	..
	23	220	24	49	99	10	38	..
Bradford	24	231	33	53	115	..	30	..
Clayton	25	50	10	6	13	15	6	..
Openshaw	26	200	25	57	98	20	..	..
West Gorton ..	27	396	10	52	227	27	80	..
Rusholme & Kirk.	28	208	50	38	81	8	31	..
Moss Side	29	11	..	..	2	..	9	..
Levenshulme ..	30	15	..	2	3	..	10	..
Gorton..	31	68	4	3	20	24	4	13
	32	84	2	3	26	4	49	..
Totals		26,435	3,341	6,664	12,913	1,397	2,069	51

From the above table it will be seen that though the greatest amount of attention has been given to the more central parts of the City, no portion has been neglected. It has always been part of the policy of the Housing Sub-Committee to distribute their work in such a manner as not to produce a severe dearth of house accommodation in any one part of the City. The attainment of this object has rendered it necessary to pay attention now to one, now to another, district. Alderman Walton Smith contended that by this graduated policy the inhabitants were able to readjust themselves, a gradual pressure moving the population to the outer part of the City being thus exerted.

The variations in activity of the operations of the Housing Sub-Committee is shown in the following table :—

TABLE 2.—RETURN SHOWING THE NUMBER OF HOUSES CERTIFIED TO, AND DEALT WITH BY, THE HOUSING, ETC., SUB-COMMITTEE IN EACH YEAR FROM FEBRUARY, 1885, TO DECEMBER 31ST, 1914, AND THE ALTERATIONS MADE AND REPORTED ON DURING THAT PERIOD.

YEAR	Number Certified and ordered to be Closed	Number of Houses added together or to other Houses	Number Demolished	Number Repaired and Reopened	Number Closed	Number not Closed	Number which stand Adjourned
1885	63	10	46	7	..	..	..
1886	115	28	75	12	..	..	..
1887	139	51	60	22	6	..	..
1888	219	63	138	16	2	..	..
1889	300	73	194	18	15	..	..
1890	202	79	82	37	4	..	..
1891	358	129	144	72	13	..	..
1892	720	208	335	153	24	..	..
1893	675	204	260	156	55	..	..
1894	904	208	556	122	18	..	..
1895	930	227	464	222	17	..	..
1896	782	162	324	269	27	..	..
1897	441	68	202	157	14	..	..
1898	506	99	195	204	8	..	..
1899	859	189	400	219	51	..	..
1900	399	80	150	133	36	..	..
1901	132	10	45	74	3	..	..
1902	545	152	170	199	24	..	..
1903	545	112	174	240	19	..	..
1904	717	127	235	329	26	..	..
1905	576	77	198	293	8	..	..
1906	558	98	103	347	10	..	..
1907	2,716	225	724	1,503	264	..	..
1908	2,239	183	499	1,411	146	..	..
1909	2,188	93	157	1,881	57	..	..
1910	1,834	117	214	1,323	154	13	13
1911	2,327	116	197	1,628	159	227	..
1912	2,247	125	273	1,427	179	243	..
1913	1,398	26	45	386	55	870	16
1914	801	2	5	53	3	716	22
Totals ..	26,435	3,341	6,664	12,913	1,397	*2,069	51

* In 1145 of these the owners have arranged to carry out alterations to meet the requirements of the Committee, many of which are in progress.

It will be seen that the work done had greatly increased from 1907 up to the year 1912.

Lately there has been a considerable decrease in this part of the work, owing partly to an appeal having been made in respect of the applicability of the Local Manchester Act dealing with the closing of houses to cases in which houses are rendered insanitary by their position. This appeal has resulted favourably to the contention of the Corporation that the Act is applicable to such cases. The War has had the effect of diminishing the working staff, and of making it more difficult for property owners to carry out structural alterations. There may, therefore, not be an immediate increase in the number of insanitary dwellings dealt with.

These alterations are not the only works done for the improvement of dwellings. The so-called conservancy system of dealing with excreta, which 11 years ago prevailed in Manchester, is now approaching abolition. This great work has partly been carried out under the Sanitary Superintendent, and partly under the City Surveyor, both, however, being under the control of the Sanitary Committee.

The alterations effected in 11 years' time are exhibited in the following table, which also shows the conversions remaining to be carried out. It is very necessary that these should not be effected without corresponding alterations in insanitary dwellings, and the rate of alterations must now be retarded. But there needs only to make conversion complete that the associated insanitary dwellings should be dealt with.

The population affected by the conversions already carried out is probably over 350,000, since it is to be remembered that many of the privies converted were used by more than one family. The conversions carried out during the last 11 years are shown on the following table :—

RETURN OF PAIL-CLOSETS AND MIDDEN PRIVIES ALTERED TO WATER-CLOSETS.

	Number of Pail-closets altered to Water-closets	Number of Midden Privies altered to Water-closets
From January 1st to December 31st, 1904	1,899	1,379
” ” ” ” 1905	2,222	1,691
” ” ” ” 1906	2,474	2,291
” ” ” ” 1907	3,857	3,617
” ” ” ” 1908	8,515	3,317
” ” ” ” 1909	12,081	1,436
” ” ” ” 1910	8,958	1,292
” ” ” ” 1911	7,314	3,649
” ” ” ” 1912	4,450	678
” ” ” ” 1913	2,322	157
” ” ” ” 1914	520	48
	54,612	19,555

The distribution of these conversions during the year 1914 is shown in the following table:—

TABLE 3.—NUMBER OF PAIL-CLOSETS AND MIDDEN PRIVIES REPLACED BY WATER-CLOSETS, FROM JANUARY 1ST TO DECEMBER 31ST, 1914, AND THE NUMBER STILL REMAINING TO BE ALTERED.

District		Pail-closets replaced by Water-closets	Midden Privies replaced by Water-closets	Total substitution	Pail-closets requiring substitution	Midden Privies requiring substitution	Total still requiring substitution
Central	1	5	..	5	121	..	121
	2	1	..	1	209	..	209
	3	69	..	69	229	..	229
Cheetham	4	6	..	6	37	..	37
	5	4	..	4	37	..	37
St. George's	6	7	..	7	105	..	105
	7	38	..	38	5	..	5
	8	13	..	13	..	..	..
Ancoats	9	103	..	103	111	..	111
Beswick	10 10	6	..	6	30	..	30
Ancoats	11	34	..	34	41	..	41
Ardwick	12	41	..	41	106	..	106
	13 13	24	..	24	33	..	33
C.-on-M.	14	69	..	69	280	..	280
	15	48	..	48	78	..	78
Hulme	16	16	..	16	..	..	..
	17	10	..	10	50	..	50
	18	19	..	19	45	..	45
Crumpsall	19	..	..	..	1	5	6
Blackley Harpurhey	20 20	..	..	..	9	26	35
Moston	21	1	..	1	5	..	5
Newton	22	..	..	..	33	19	52
	23	5	..	5	49	..	49
Bradford	24	..	..	..	53	..	53
Clayton	25	..	..	..	32	38	70
Openshaw	26	..	..	..	23	..	23
West Gorton	27	..	1	1	..	30	30
Rusholme	28	..	..	..	38	..	38
Moss Side	29	..	18	18	..	40	40
Levenshulme	30	1	..	1	3	5	8
Gorton	31 32	..	29	29	..	10	10
Totals		520	48	568	1,763	173	1,936

Table 4 shows the number of houses certified as unfit for human habitation in 1914, with the result up-to-date.

TABLE 4.—SHOWING THE NUMBER OF HOUSES CERTIFIED TO, AND DEALT WITH BY, THE COMMITTEE, FOR THE YEAR 1914.

DISTRICT	Number Certified and ordered to be Closed	Number of Houses added together or to other Houses	Number Demolished	Number Repaired and Re-opened	Number Closed	Number not Closed	Number which stand Adjourned
1	25	..	..	..	..	25	..
2	60	..	..	2	..	56	2
3	13	..	..	..	3	10	..
4	..	..	..	..	..	..	..
5	..	..	..	..	..	..	..
6	2	..	..	..	..	2	..
7	3	..	..	..	..	3	..
8	13	..	..	..	..	13	..
9	39	..	..	..	..	33	6
10 Ancoats ..	..	..	..	..	..	..	..
10 Beswick ..	13	..	..	..	..	13	..
11	25	..	..	2	..	23	..
12	119	..	2	26	..	91	..
13 Ardwick ..	23	..	..	..	..	23	..
13 C.-on-M. ..	..	..	..	..	..	..	..
14	74	..	3	1	..	62	8
15	..	..	..	..	..	..	..
16	28	..	..	3	..	19	6
17	58	..	..	..	..	58	..
18	59	2	..	6	..	51	..
19	..	..	..	..	..	..	..
20 Blackley ..	30	..	..	..	..	30	..
20 Harpurhey	36	..	..	..	..	36	..
21	..	..	..	..	..	..	..
22	5	..	..	..	..	5	..
23	39	..	..	1	..	38	..
24	..	..	..	..	..	..	..
25	6	..	..	..	..	6	..
26	..	..	..	..	..	..	..
27	56	..	..	10	..	46	..
28	31	..	..	..	..	31	..
29	..	..	..	..	..	..	..
30	4	..	..	..	..	4	..
31	4	..	..	..	..	4	..
32	36	..	..	2	..	34	..
Total	801	2	5	53	3	*716	22

* In 352 of these cases the owners have arranged to make alterations to meet the requirements of the Committee.

It will be seen from the foregoing tables that the rate of conversion of privies is slackening. This arises partly from the fact that comparatively few remain to be converted, partly from the circumstance that the remaining houses at which conversion is required are chiefly the residuum requiring the attention of the Housing Sub-Committee on account of their insanitary condition.

The following is a classification of the houses represented to the Committee as unfit for human habitation, arranged according to the regulations of the Local Government Board.

This classification does not represent the houses inspected, but only those reported as unfit for human habitation. It has not been possible to supply figures for the houses inspected with special reference to the Housing and Town Planning Act.

The question as to the manner in which house inspections shall be made and registered has now received the attention of the Housing Sub-Committee.

TABLE SHOWING THE NUMBER OF HOUSES INSPECTED AND THE NUMBER REPORTED TO THE HOUSING SUB-COMMITTEE AS UNFIT FOR HUMAN HABITATION DURING THE YEAR 1914.

Number of Dwelling-houses inspected for all purposes	78,102
,, considered by the District Inspector of Nuisances unfit for human habitation	801
,, of representations made by the Sanitary Superintendent under a Local Act	801
,, of Closing Orders made	779
,, of Dwelling-houses the consideration of which stand adjourned	22
,, put in a fit state for human habitation after Closing Order had been made	55

General character of defects stated to exist :—

Ventilation defective	334
Light defective	281
Closet accommodation defective	580
External disrepair	515
Internal disrepair	432
Drainage defective	260
*Dampness	107
Water supply defective	52
Dirty—always immediately cleansed	22
Arrangement for deposit of refuse defective	602
Yards require paving	197
Passages require paving	107

The new houses certified during the year 1913–1914 is given in the following table A. It will be noted that there is a considerable reduction as compared with the numbers for previous years.

The reduction in neighbouring districts shown in Table B appears to have been arrested. If the natural increase in the population may be taken as a guide to the rate of growth of the population, taken in association with the growth of manufactures, it follows that the number of persons per house is increasing, and that overcrowding is probably increasing.

House inspection is now being carried out in the manner prescribed by the Regulations of the Local Government Board under the Housing and Town Planning Act, the records being in card index form, and under the charge of Mr. Irvine, of the City Surveyor's Department. The card index system was commenced during the year 1914.

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* Nearly all insanitary houses are more or less damp, since there is no damp-proof course in the older houses.

TABLE A—STATEMENT AS TO THE NUMBER OF NEW DWELLING-HOUSES CERTIFIED AS FIT FOR HUMAN HABITATION IN THE VARIOUS DIVISIONS OF THE CITY BETWEEN 1893 AND 1914.

DISTRICT	1893 to 1894	1894 to 1895	1895 to 1896	1896 to 1897	1897 to 1898	1898 to 1899	1899 to 1900	1900 to 1901	1901 to 1902	1902 to 1903	1903 to 1904	1904 to 1905	1905 to 1906	1906 to 1907	1907 to 1908	1908 to 1909	1909 to 1910	1910 to 1911	1911 to 1912	1912 to 1913	1913 to 1914	TOTAL 1893 to 1914
Ancoats	70	7	97	113	53	25	28	33	1	4 including 1 Lodging house	11	1	46†	13‡	39	1	*16			...	...	...
Central........																		5	5	...	6	
St. George's ..	...	...	...	...	...	...	...	...	5	1	9	*95	...	...	...	31	*			...		...
Cheetham ...	97	37	155	269	370	315	128	253	171	199	240	133	186	226	101	280	145	99	87	36	8	3757
Crumpsall ...	24	44	39	37	41	18	102	53	56	82	85	57	50	60	66	44	5	7	14	31	50	1007
Blackley	5	19	41	31	56	67	58	33	42	57	53	124	95	130	175	102	125	103	87	56	94	1606
Harpurhey ...	170	191	342	253	346	327	169	129	70	92	14	7	30	149	7	12	3	...	...	...	...	2486
Moston	89	148	193	225	263	248	282	179	78	109	156	222	327	481	394	436	383	318	102	48	43	4832
Newton	30	65	140	96	136	134	110	90	211	167	230	193	287	159	130	91	112	10	6	45	20	2532
Bradford	21	65	67	198	91	103	198	47	239	29	40	7	5	...	26	57	19	12	...	...	...	1398
Beswick	8	...	97	118	128	98	119	175	94	...	15	...	...	4	...	...	...	...	1	...	...	882
Clayton	9	39	111	152	161	229	234	164	104	107	113	103	113	112	112	131	85	111	62	9	42	2376
Ardwick	59	177	261	192	295	361	145	110	109	171	13	45	36	27	15	11	...	...	7	...	...	2097
Openshaw ...	15	60	69	71	152	119	182	80	190	145	155	91	84	108	97	39	131	73	114	138	43	2567
Gorton (West)	2	2	20	87	236	178	57	...	...	...	50	38	3	...	...	...	...	...	...	...	...	991
Rusholme and Kirk.	89	211	277	294	354	486	462	288	346	258 122	453	261 95 356	345 109 454	474 118 592	408 57 465	253 64 317	114 74 } 188	71 55 }	39	64 ... } 64	44 24	6473
C.-on-M.	88	18	36	46	57	1	32	48	27	12	15	5	2	1	38	56	57	2	...	...	...	761
Hulme	1	...	29	24	4	3	2	4	1	6	...	1	2	...	1	...	...	...	...	90	...	171
Moss Side ...	...	...	...	...	...	...	...	...	...	...	...	364	220	66	51	103	100	9	41	10	2	966
Withington ...	...	...	...	...	...	...	...	...	...	...	...	362	560	506	532	633	666	614	468	435	332	5108
Gorton	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24	31	16	...	5	76
Levenshulme..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	197	58	23	35	35	348
City Totals ...	777	1083	1974	2206	2743	2712	2308	1686	1744	1561	1652	2204	2500	2634	2249	2344	2256	1578	1072	997	748	41149

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* NOTE.—Including 64 Dwelling-houses belonging to Sanitary Committee and 1 Lodging-house.

† Including 1 Lodging-house and 44 Tenements at Chief Fire Station.

‡ Including 2 Lodging-houses.

TABLE B—NEW HOUSES CERTIFIED IN OUTSIDE DISTRICTS FROM 1894 TO 1914.

DISTRICTS	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Salford	454	613	883	872	1268	885	674	818	733	603	599	619	519	581	415	554	563	293	248	188	218
Eccles	100	118	113	165	219	202	215	215	185	244	226	323	346	218	202	231	178	117	74	63	71
Stretford	274	356	313	355	340	262	265	320	329	379	483	365	376	341	236	304	258	181	101	79	38
Urmston	34	80	102	135	88	43	18	21	24	35	106	90	50	35	40	13	20	18	3	1	3
*Withington Urban District Council :																					
Withington, including Whalley Range	50	70	79	162	171	225	169	59	52	35	139	..	..	..	..	..	..	..	..	..	..
Didsbury	26	79	55	45	66	139	66	37	34	43	68	..	..	..	..	..	..	..	..	..	..
Burnage	21	..	1	24	13	1	14	14	59	1	..	..	..	..	..	..	..	..	..	..	..
Chorlton-cum-Hardy	37	94	155	182	152	55	191	220	182	247	215	..	..	..	..	..	..	..	..	..	..
*Moss Side	..	..	..	..	119	35	403	400	314	157	234	..	..	..	..	..	..	..	..	..	..
*Levenshulme	..	..	..	..	224	290	420	180	236	278	318	328	184	131	92	233	..	..	..	..	..
Droylsden	..	..	..	..	126	36	41	43	..	135	50	33	38	65	30	34	12	12	37	23	31
*Gorton	..	..	..	..	397	411	352	353	187	402	362	391	685	519	339	149	..	..	..	..	..
Totals	996	1410	1701	1940	3183	2584	2828	2680	2335	2559	2800	2149	2198	1890	1354	1518	1031	621	463	354	361

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* The figures for these districts, since their incorporation within the City, are given in Table A.

MONSALL HOSPITAL.

Report by Dr. James Fletcher, Medical Superintendent.

Report for 1914.

The number of patients admitted was 3,604, which shows an increase of 411 over the preceding year; this is the largest number of admissions in the history of the hospital.

The admissions of Scarlet Fever and Erysipelas showed a marked increase, but those of Enteric Fever a decided fall.

The average daily number of patients in hospital was 460·2, as against 458·4 in 1913.

The average length of stay in hospital for all patients who recovered was 49·7 days; for fatal cases 9·9.

The average daily number of resident officers, nurses, and servants was 186.

The fatality rate for all cases was 7·5 per cent., as against 6·7 in 1913; the rates of Scarlet Fever and Enteric Fever were higher than in the previous year, but those of Puerperal Fever, Diphtheria, and Erysipelas were practically the same; 67, or nearly a quarter of the deaths occurred within 48 hours of admission.

The health of the staff during the year was fairly good. One Medical Officer, five Nurses, and one Maid contracted Scarlet Fever; one Nurse each contracted Enteric Fever and Varicella.

All the above, however, made good recoveries.

Thirty-three applications were received for the post of Ward Sister and 201 for Probationerships, of which 5 and 40 respectively were accepted.

Nineteen Probationers left during or at the end of their trial months; 26 finished their training, 12 of whom proceeded to a General Hospital.

SCARLET FEVER.

The number of patients admitted was 2,623, which is 376 more than in 1913.

Of 42 admissions, 24 were also suffering from Diphtheria, 14 from Whooping Cough, 3 from Measles, and 1 from Varicella; whilst of 18 others, 7 were incubating Whooping Cough, 7 Chicken Pox, and 4 Measles.

The type of disease generally speaking was more severe than in 1913; 101 deaths occurred, giving a fatality rate of 3·8 per cent., as against 2·9 in 1913; the rate was higher in males than in females.

Eighteen patients died within 48 hours of admission.

The average stay in hospital for patients who recovered was 49·6 days; for fatal cases 10·8.

POST-SCARLATINAL DIPHTHERIA AND DIPHTHERIA "CARRIERS."

Six patients developed an attack of Post-Scarlatinal Diphtheria, all of whom recovered.

A culture was taken from the nose and throat of each Scarlet Fever patient on admission, with the result that 30 per cent. of the patients were found to be harbouring a bacillus corresponding morphologically with the Diphtheria Bacillus; the bacillus was found in the nose in 10·8 per cent., the throat in 12·8, and the nose and throat in 7·1 of the cases.

Two large Pavilions were set apart throughout the year for the nursing of such cases.

"RETURN" CASES.

The number of alleged infecting cases, which gave rise to 62 secondary cases, out of a total of 2,521 discharges, was 54; this gives a "return" case rate of 2·1 per cent., as against 3·3 in 1913.

If the interval which elapsed between the arrival home of the infecting patient and the onset of the "return" case be limited to a month, the rate becomes 1·9 per cent., as against 2·5 in 1913.

The average number of days ill of the infecting cases was 55·9, and the average interval, in days, between the return home of the patient and the onset of the "return" case 13·8, the extremes being 3 and 72.

Forty-one of the 54 infecting patients had uncomplicated attacks.

The age of the "return" case was less than that of the infecting one in about 72 per cent. of the cases.

DIPHTHERIA.

Four hundred and forty-two patients were admitted, being 28 more than in 1913.

Of 30 admissions, 17 were also suffering from Scarlet Fever, 10 from Measles, 2 from Varicella, and 1 from Pertussis; whilst of 3 others, 1 was incubating Scarlet Fever, 1 Measles, and 1 Varicella.

Seventy-four deaths occurred, giving a fatality rate of 16·1 per cent., as against 16 in 1913; the rate was higher in females than in males.

Thirty-seven of the deaths took place within 48 hours of admission, and in 5 cases a concurrent attack of Measles, and in 1 Scarlet Fever, was a contributory cause of death.

The larynx was found to be involved on admission in 42 per cent. of the cases.

Tracheotomy was performed on 89 patients, of whom 37 died, giving a fatality rate of 41·5 per cent. Of the deaths, 20 occurred within 48 hours of admission.

Antitoxin, usually in very small dose, had been given before admission to 30 per cent. of the patients.

A serum rash was noted in 34 per cent. of those injected.

A swab had been taken before admission in only 42 per cent. of the cases.

The average stay in hospital for patients who recovered was 64·4 days; for fatal cases 4·4.

ENTERIC FEVER.

The number of admissions was 122, or 104 less than in 1913.

Twenty-six patients died, giving a fatality rate of 18·8 per cent., as against 15·6 in 1913; the rate was higher in females than in males.

One death occurred within 48 hours of admission.

The average stay in hospital for patients who recovered was 60·6 days; for fatal cases 12·8.

Before discharge from hospital the stools and urine of all patients were submitted to bacteriological examination to ascertain the absence of the Typhoid Bacillus. Of 112 cases, 104 gave negative results and 8 positive, the urine being positive in 6 instances and the stools 2.

ERYSIPELAS.

The admissions numbered 158, an increase of 72 on the previous year.

Nineteen deaths occurred, giving a fatality rate of 12·8 per cent., as against 12·1 in 1913.

Four deaths took place within 48 hours of admission.

The average stay in hospital for patients who recovered was 23·9 days; for fatal cases 7·3.

PUERPERAL FEVER.

Seventy-nine patients were admitted, a decrease of 3 on 1913. The infant was in 45 instances admitted with the mother.

Sixteen patients died, giving a fatality rate of 20 per cent., the same rate as in 1913 ; 3 deaths took place within 48 hours of admission.

Of the deaths, 10 were due to Septicæmia, 3 to Pneumonia, and 1 each to Nephritis, Pulmonary Embolism, and Peritonitis.

The average number of days ill on admission for cases which recovered was 4·9 ; for fatal cases 5·5.

The average stay in hospital for patients who recovered was 37·2 days ; for fatal cases 12·1.

INFANTILE DIARRHŒA.

During the months of August, September, and October, patients were admitted to the Crêche for treatment.

Twenty-one patients were admitted, of whom 11 recovered and 10 died, giving a fatality rate of 47·6 per cent.

Two of the patients were suffering from Broncho-Pneumonia, and 1 from Whooping Cough on admission ; marked wasting was present in 12 cases.

Although the death-rate was high, it is fairly certain that at least 8 of those who recovered would have succumbed had they not been removed to hospital.

The average length of stay of those who recovered was 68·6 days ; of fatal cases 24·1.

A history of only a short period of breast feeding, followed by various forms of irrational artificial feeding, was obtained in most of the cases, and as an index of the childrens' surroundings, it may be stated that at this early age many were found on admission to have pediculi in the hair, and some were badly flea bitten.

As regards treatment, subcutaneous salines were seldom required, but rectal irrigation was found very beneficial.

Albumen water in the acute stage, followed by diluted milk with the addition of cream, milk-sugar, and albulactin gave the best results.

OTHER DISEASES.

In this class are included patients whose illness was incorrectly diagnosed, certain cases of non-notifiable disease, and infants admitted with their mother.

Thirty-eight deaths occurred, giving a fatality rate of 21·3 per cent. Four deaths took place within 48 hours of admission.

The average stay in hospital for patients who recovered was 31·8 days ; for fatal cases 16·1.

LABORATORY REPORT.

The work done in the Laboratory has again been very heavy.

All the necessary media were prepared by the Dispenser at the hospital. The number of Bacteriological examinations performed was as follows :—

Cultures from Nose, Throat, and Ear	13,778
,, Uterus	62
,, Vagina	2
Widal reactions	136
Typhoid Stools	128
,, Urine	143
Examination of Sputum	20
,, Hair	18
,, Pus	4
,, Spinal Fluid	3
,, Urine	3
,, Vomit	1
,, Spleen and Gall Bladder	1
	14,299

STATISTICAL REPORT FOR THE YEAR 1914.

Remaining in Hospital on January 1st, 1914	476
Patients admitted during 1914	3,604
	4,080
Recovered and died during 1914	3,627
Remaining in Hospital on December 31st, 1914.. ..	453
	4,080

Total number of deaths during 1914	274
Net mortality	7·5%
Of the deaths, 67 occurred within 48 hours of admission	24·4%
Daily average number of patients	460·2
Daily average number of officers, nurses, and servants	186·0
Average stay of recovered patients (in days)	49·7
,, ,, fatal cases	9·9

TABLE SHOWING MONTHLY DISTRIBUTION OF DISEASES THROUGHOUT THE YEAR.

Discharges and Deaths.

1914	Scarlatina	Diphtheria	Enteric Fever	Erysipelas	Puerperal Fever	Other Diseases	Total
January	223	48	21	5	11	9	317
February	197	33	21	17	6	14	288
March	192	32	12	10	8	16	270
April	161	39	18	13	8	17	256
May	232	52	16	12	6	13	331
June	173	40	12	11	5	11	252
July	197	41	7	9	4	13	271
August	265	46	9	9	4	14	347
September..	220	9	1	16	6	20	272
October	296	29	4	13	9	19	370
November..	226	43	5	18	5	20	317
December	240	48	12	15	8	13	336
Total	*2622	†460	138	148	80	179	3627

* Of these, 3 had Scarlatina and Measles
,, 1 ,, ,, ,, Varicella
,, 14 ,, ,, ,, Pertussis
,, 24 ,, , ,, Diphtheria
,, 19 ,, ,, ,, Ringworm
,, 4 ,, ,, ,, Scabies

† Of these, 17 had Diphtheria and Scarlet Fever
,, 10 ,, ,, ,, Measles
,, 2 ,, ,, ,, Varicella
,, 1 ,, ,, ,, Pertussis
,, 3 ,, ,, ,, Ringworm

Co-existent.

TABLE SHOWING NUMBERS OF VARIOUS DISEASES TREATED.

DISEASE	Remaining in Hospital, Jan. 1st, 1914	Admitted during 1914	Discharges and Deaths during 1914	Remaining in Hospital, Dec. 31st, 1914
Scarlatina	345	2623	2622	346
Diphtheria	76	442	460	58
Enteric Fever..................	38	122	138	22
Erysipelas	5	158	148	15
Puerperal Fever	8	79	80	7
Typhus Fever	0	1	1	0
Other Diseases	4	179	178	5
Total................	476	3604	3627	453

Case Mortality Per Cent.

Year	Scarlatina	Diphtheria	Enteric Fever	Puerperal Fever	All diseases
1903	4·7	18·4	19·2	22·2	8·5
1904	3·3	16·3	14·1	50·0	6·5
1905	3·6	19·9	15·1	24·4	8·4
1906	4·5	19·3	18·1	24·4	8·2
1907	4·5	17·2	10·2	24·4	7·4
1908	3·8	19·5	16·8	20·3	7·5
1909	5·7	18·3	16·9	27·0	8 8
1910	3·3	17·8	16·3	19·7	7·7
1911	2·6	19·3	14·5	15·2	6·6
1912	3·1	21·0	20·8	15·9	7·7
1913	2·9	16·0	15·6	20·0	6·7
1914	3·8	16·1	18·8	20·0	7·5

Scarlatina.

Age of Patients	MALE			FEMALE			TOTAL		
	Cases	Died	Mortality per cent.	Cases	Died	Mortality per cent.	Cases	Died	Mortality per cent
Under one year ...	6	1		6	1		12	2	
1 to 2 years ...	37	8		24	8		61	16	
2 to 3 ,, ...	62	8		64	6		126	14	
3 to 4 ,, ...	76	6		74	7		150	13	
4 to 5 ,, ...	116	5		121	8		237	13	
5 to 10 ,, ...	531	10		540	13		1071	23	
10 to 15 ,, ...	229	5		277	5		506	10	
15 to 20 ,, ...	107	5		103	...		210	5	
20 to 25 ,, ...	40	1		69	1		109	2	
25 to 30 ,, ...	23	...		33	...		56	...	
30 and over ,, ...	29	2		55	1		84	3	
Total	1256	51	4·1	1366	50	3·6	2622	101	3·8

Of the deaths, 2 were complicated by another co-existent disease; 18 deaths occurred within 48 hours of admission.

COMPLICATIONS IN SCARLET FEVER.

Complication	Number	Percentage
Rhinorrhœa of Convalescence..	273	10·4
Otorrhœa........................	254	9·6
Nephritis	111	4·2
Albuminuria of Convalescence..	132	5·03
Adenitis and Abscess	45	1·7
Onychia	40	1·5
Relapse	9	0·3
Pneumonia	15	0·6
Arthritis	31	1·2
Vaginitis	5	0·2
Endocarditis	6	0·2
Mastoid Abscess.................	4	0·1

SCARLATINA—*continued*

YEAR	No. of Scarlatinal Discharges and Deaths	No. of Cases of Post Scarlatinal Diphtheria	Case Percentage	Died
1901	2669	104	3·90	3
1902	2018	29	1·43	1
1903	1877	8	0·42	2
1904	1560	7	0·45	0
1905	1499	13	0·90	0
1906	1897	10	0·53	1
1907	1548	1	0·06	0
1908	1763	2	0·11	0
1909	1960	1	0·05	0
1910	1573	4	0·25	0
1911	1243	2	0·16	0
1912	1401	7	0·49	0
1913	2186	5	0·22	1
1914	2622	6	0·22	0

DIPHTHERIA.

AGE OF PATIENTS	MALE			FEMALE			TOTAL		
	Cases	Died		Cases	Died		Cases	Died	
Under 1 year ...	7	4		6	4		13	8	
1 to 2 years ...	22	10		22	12		44	22	
2 ,, 3 ,, ...	32	5		12	6		44	11	
3 ,, 4 ,, ...	21	2		37	4		58	6	
4 ,, 5 ,, ...	34	4		30	5		64	9	
5 ,, 10 ,, ...	68	6		87	6		155	12	
10 ,, 15 ,, ...	21	2		13	2		34	4	
15 ,, 20 ,, ...	8	...		11	2		19	2	
20 ,, 25 ,, ...	5	...		10	...		15	...	
25 ,, 30 ,, ...	2	...		2	...		4	...	
30 and over ...	3	...	Mortality per cent.	7	...	Mortality per cent.	10	...	Mortality per cent.
Total	223	33	14·7	237	41	17·2	460	74	16·1

37 deaths occurred within 48 hours of admission.
Of the deaths, 6 were complicated by other co-existent diseases.

DIPHTHERIA.

TABLE SHOWING INTERVAL ELAPSING BETWEEN DATE WHEN THE PATIENT WAS FIRST SEEN BY A MEDICAL MAN AND THE DATE OF ADMISSION TO HOSPITAL, ALSO SHOWING DAY OF DISEASE ON ADMISSION.

DAYS' INTERVAL	Interval between admission and date when patient was first seen by a Medical Attendant		Day of disease on admission	Day of disease on admission	
	All Cases	Deaths		All Cases	Deaths
Sent in on the same day	145	30	Sent in on the same day	11	3
1 day interval	94	8			
2 days' ,,	72	15	2nd day	73	12
3 ,, ,,	50	9	3rd ,,	87	17
4 ,, ,,	38	6	4th ,,	80	12
5 ,, ,,	17	1	5th ,,	73	14
6 ,, ,,	18	3	6th ,,	41	7
7 ,, ,,	10	1	7th ,,	29	3
8 ,, ,,	2	...	8th ,,	21	2
9 ,, ,,	2	1	9th ,,	12	...
10 ,, ,,	6	...	10th ,,	5	3
Over 10 days' interval	6	...	Over 10th day	28	1
Total	460	74	Total	460	74

COMPLICATIONS IN DIPHTHERIA.

Complication	Number of Cases	Percentage
Otorrhœa	24	5·2
Broncho-pneumonia	21	4·5
All forms of Paralysis	36	7·8
Palate alone	18	3·9
Cardiac Paralysis	4	0·8
Other Paralysis	14	3·4

TRACHEOTOMY CASES.

AGE OF PATIENTS	NO. OF PATIENTS	DIED	MORTALITY PER CENT.
Under 1 year	4	4	100
1 to 2 years	19	17	89·4
2 ,, 3 ,, ...	17	6	35·2
3 ,, 4 ,, ...	17	3	17·6
4 ,, 5 ,, ...	19	5	26·3
5 ,, 10 ,, ...	12	1	8·3
10 ,, 15 ,, ...	1	1	100·0
Total	89	37	41·5

Of the deaths, 20 occurred within 48 hours of admission, in three cases Measles was co-existent.

ENTERIC FEVER.

AGE OF PATIENTS	MALE			FEMALE			TOTAL		
	Cases	Died	Mortality percent.	Cases	Died	Mortality percent.	Cases	Died	Mortality percent.
Under one year ...	...	...		...	...		...	...	
1 to 2 years ...	1	...		...	...		1	...	
2 to 3 ,, ...	...	...		...	...		...	...	
3 to 4 ,, ...	...	...		1	...		1	...	
4 to 5 ,, ...	1	...		1	...		2	...	
5 to 10 ,, ...	7	...		5	...		12	...	
10 to 15 ,, ..	6	1		8	1		14	2	
15 to 20 ,, ...	14	2		11	2		25	4	
20 to 25 ,, ...	15	4		6	1		21	5	
25 to 30 ,, ...	12	2		8	4		20	6	
30 to 35 ,, ...	7	...		6	1		13	1	
35 to 40 ,, ...	5	2		6	1		11	3	
40 to 45 ,, ...	5	2		1	1		6	3	
45 to 50 ,, ...	4	2		...	...		4	2	
50 and over ...	6	...		2	...		8	...	
Total.........	83	15	18·1	55	11	20	138	26	18·8

Of the deaths, 1 occurred within 48 hours of admission.

COMPLICATIONS IN ENTERIC FEVER.

Complication	Number of Cases	Percentage	Complication	Number of Cases	Percentage
Pneumonia	6	4·3	Intestinal Hæmorrhage	15	10·8
Pleurisy and Effusion	3	2·1	Perforation and Peritonitis	4	2·8
Relapse	13	9·4	Otorrhœa	4	2·8

ENTERIC FEVER.

TABLE SHOWING INTERVAL ELAPSING BETWEEN DATE WHEN PATIENT WAS FIRST SEEN BY A MEDICAL MAN AND THE DATE OF ADMISSION TO HOSPITAL, ALSO SHOWING DAY OF DISEASE ON ADMISSION.

DAYS' INTERVAL	Interval between admission and date when Patient was first seen by a Medical Attendant		Day of disease on admission	Day of disease on admission	
	All Cases	Deaths		All Cases	Deaths
Sent in on same day...	2	1	Admitted same day	...	...
1 day interval ..	1	...	2nd day	...	...
2 days' ,, ...	11	4	3rd ,, ...	1	...
3 ,, ,, ...	4	...	4th ,, ...	1	1
4 ,, ,, ...	10	...	5th ,, ...	2	...
5 ,, ,, ...	16	3	6th ,, ...	3	...
6 ,, ,, ...	11	2	7th ,, ...	8	3
7 ,, ,, ...	8	2	2nd week	49	6
8 ,, ,, ...	8	2	3rd ,, ...	48	7
9 ,, ,, ...	13	...	4th ,, ...	12	3
10 ,, ,, ...	4	...	5th ,, ...	8	3
Over 10 days' interval	50	12	Over 5th week ...	6	3
Total	138	26	......	138	26

OTHER DISEASES.

Certified as	Actual Disease	No.
Scarlatina......	Tonsillitis	35
"	Erythema	8
"	Rötheln.........	3
"	Nil	2
"	Varicella	1
"	Pneumonia......	1
"	Vaccinia	1
"	Pleurisy	1
"	Measles and Broncho-pneumonia...	1
"	Ulcerative Stomatitis ...	1
"	Corrosive Acid Poisoning ...	1

Total......55 or 2·09% of cases discharged and died.

Certified as	Actual Disease	No.
Diphtheria ...	Measles	5
" ...	Pneumonia	3
" ...	Bronchitis	3
" ...	Tonsillitis	2
" ...	Vincent's Angina	2
" ...	Pharyngitis......	1
" ...	Nil	1
" ...	Caries of Spine	1
" ...	Acute Encephalitis	1

Total...19 or 4·1%

Certified as	Actual Disease	No.
Erysipelas ...	Cellulitis	5
" ...	Eczema	2
" ...	Septic Wound..	2
" ...	Cancrum Oris..	1
" ...	Ulcer of Leg ...	1
" ...	Varicose Ulcer.	1
" ...	Sycosis Menti..	1
" ...	Stitch Abscess..	1
" ...	Senile Decay...	1

Total...15 or 10·1%

Certified as	Actual Disease	No.
Enteric Fever...	Pneumonia ...	3
" " ...	Diarrhœa	2
" " ...	Miliary Tuberculosis	1
" " ...	Influenza	1
" " ...	Tubercular Meningitis	1
" " ...	Gastritis	1
" " ...	Arterio-Sclerosis and Pneumonia ..	1
" " ...	Appendicitis ...	1
" " ...	Cerebral Tumour	1

Total......12 or 8·6% of cases discharged and died.

Certified as	Actual Disease	No.
Puerperal Fever	Miscarriage	2
" ...	Phthisis	1
" ...	Nil	1
" ...	Abortion	1
" ...	Pneumonia and Pleural Effusion	1
" ...	Acute Yellow Atrophy of Liver..........	1
" ...	Cystitis	1

Total...8 or 10%

Certified as	Actual Disease	No.
"With Mother"	With Mother...	45
Gastro-Enteritis	Gastro-Enteritis	19
"	Pneumonia	1
Ophthalmia-Neonatorum	Ophthalmia Neonatorum	1
For Observation	Pneumonia	1
"	Carcinoma-Stomach	1
Cerebro Spinal Fever	Tubercular Meningitis	1

Total of other Diseases, 178.

In the other diseases there were 38 deaths, 4 of which occurred within 48 hours of admission. Total mortality of other diseases, 21·3 per cent.

PARTICULARS OF "RETURN" CASES OF SCARLET FEVER.

Number of alleged originating cases	54
Ditto "return" cases	62
Alleged originating case percentage of Scarlet Fever patients Discharged	2·1
Alleged "return" case percentage of Scarlet Fever patients Discharged	2·4

TABLE A.

"RETURN" CASES.

SHOWING DURATION OF DISEASE OF ORIGINATING CASE.

Time	No. of Cases
4 to 5 weeks	4
5 to 6 "	18
6 to 7 "	12
7 to 8 "	4
8 to 9 "	4
9 to 10 "	1
10 to 11 "	4
11 to 12 "	1
Over 12 "	6
Total	54

TABLE B.

"RETURN" CASES.

SHOWING CONDITION OF ORIGINATING CASE BOTH ON AND AFTER DISCHARGE.

Condition on Discharge.

Nothing abnormal	42
Still Desquamating	12
	54

Condition after Discharge.

Nothing abnormal	28
Rhinorrhœa	13
Desquamating	7
Otorrhœa	3
"Sore" Nose	1
Swollen Neck Glands	1
"Sore" Nose and Desquamating	1
	54

TABLE C.

SHOWING INTERVAL ELAPSING BETWEEN DISCHARGE OF ORIGINAL CASE AND ONSET OF SECONDARY CASES.

Time	No. of Cases
Under 48 hours	0
2 and under 3 days	0
3 ,, 4 ,,	3
4 ,, 5 ,,	5
5 ,, 6 ,,	6
6 ,, 7 ,,	5
7 ,, 14 ,,	22
14 ,, 21 ,,	5
21 ,, 28 ,,	9
28 ,, 35 ,,	3
5 weeks and over	4
Total	62

TABLE D.

SHOWING INTERVAL BETWEEN THE DISCHARGE OF THE 54 ALLEGED ORIGINATING CASES AND 54 ALLEGED RETURN CASES RESPECTIVELY, AND THE PERCENTAGE OF SCARLET FEVER PATIENTS DISCHARGED.

Time	No. of Cases	Percentage of Scarlet Fever Patients Discharged
Up to 14 days	39	1·54
15 to 28 days	10	0·39
Over 28 days	5	0·19
Total	54	2·1

NOTE.—Where more than one case is said to have originated from a discharged case, the date is taken from the first.

BAGULEY SANATORIUM.

Report for the Year ending December 31st, 1914.

By Herbert S. Lister, M.B., Ch.B., M.R.C.S., Medical Superintendent.

During the year 387 patients suffering from Pulmonary Tuberculosis were admitted to the Sanatorium. These, with the 139 remaining in Hospital on January 1st, 1914, made a total of 526 under treatment during the year. Of these 313 were discharged and 67 died, leaving 146 patients in Hospital on December 31st, 1914. Of the 387 patients admitted, 381 came from the Manchester area and 6 from the Bucklow area.

The death-rate per cent. during the year was 17·6, considerably in excess of 1913, when it was only 11·8.

The daily average number of patients was 143, out of a possible 148.

The average stay of each patient was 134·7 days, as compared with 98·9 in the previous year.

The results of treatment have on the whole been satisfactory, considering the advanced character of the disease in the majority of cases. Of the total number of patients discharged (313) 265 gained in weight to a greater or less extent, and in several instances the increase was between two and three stones. This increase in weight was usually accompanied by an improvement in the general condition of the patient, and some relief of the cough and other troublesome symptoms.

Reviewing the cases as a whole, I think we must conclude that the type of case admitted has been decidedly worse than in the preceding twelve months. This is borne out by three facts :—

(1) The marked increase in the death-rate—from 11·8 to 17·6.

(2) The greater number of cases classed as Turban III.

(3) The greater increase in the number of patients whose working capacity on discharge was classed as "poor," "fair," or "nil," and a corresponding decrease in the number classed as "good" and "full."

Table A gives the number of patients in Hospital at the commencement of each month; also the number admitted, discharged, and died during each month. Also the totals for the whole year.

Table A.

	Number in Hospital	Admitted	Discharged	Died	Remaining
January 1st	139	47	41	6	139
February 1st	139	25	15	7	142
March 1st	142	27	18	5	146
April 1st..	146	23	20	3	146
May 1st	146	27	23	8	142
June 1st..	142	42	33	8	143
July 1st	143	39	32	5	145
August 1st	145	33	28	4	146
September 1st ..	146	27	18	7	148
October 1st	148	21	19	6	144
November 1st ..	144	46	38	5	147
December 1st.. ..	147	30	27	3	146
Total for Year..	139	387	313	67	146

Table B shows the working capacity of all patients at the time of discharge :—

Table B.

Working Capacity on Discharge.

Full..	22
Good	28
Fair..	114
Poor	52
Nil	97
Total	313

Table C shows the ages of all patients discharged or died in periods of 5 years :—

Table C.

Age	1–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65
Number of Patients... ...	...	3	5	51	57	58	66	56	51	28	13	5	7

In order that some idea of the stage at which the patients are admitted to the Sanatorium may be conveyed, the whole of the cases have been divided according to the method of Turban :—

Turban I.—Disease of slight severity, affecting not more than either (1) one apex down to the second rib in front, or (2) two apices extending not more than to the clavicle in front and the spine of the scapula behind.

Turban II.—More extensive than I., but affecting not more than one lobe, or, if very acute, half a lobe.

Turban III.—All cases of greater severity than II.

Turban I.	2
,, II.	29
,, III.	359
Total	380

The Dentist (Dr. Preston) has again performed very useful work in the examination of the patients' mouths, and where necessary extracting carious teeth, and giving advice generally as to the care of the teeth and the hygiene of the mouth. As I have pointed out before, the work of this department is very seriously handicapped by the inability to provide artificial teeth, which is a very serious need with many of our patients. Provision can, of course, be made through the Dental Hospital, but this proves a very lengthy and tedious process, and moreover necessitates several journeys to Manchester, which cannot always be arranged.

The provision of a few sets to certain selected necessitous cases would prove a very great boon, and materially assist recovery.

Laboratory.—The Laboratory work has again been limited to the examination of sputum. During the year 488 specimens of sputum were examined. Of these 425 were positive and 63 negative. Of the latter, 27 were found on re-examination to contain the tubercle bacillus. The remaining 36 either remained negative on further examination, or owing to early discharge of patient no further specimen was obtained. These were, however, without exception clinically definite cases of Pulmonary Tuberculosis.

Tuberculin has been used in a few instances, both for diagnosis and treatment, but for the most part the cases are too advanced to need the former or to benefit by the latter.

Farming.—At the beginning of the year the Committee decided to commence farming operations upon a small scale, and utilise some of the surrounding land for the production of potatoes and green vegetables for the use of the Institution. To this end a Farm Bailiff was appointed in April, and several acres of land prepared and planted. In spite of the lateness of the commencement of operations the result was very satisfactory, and excellent crops of potatoes and all varieties of green vegetables were raised. Of the latter more were raised than could be used by the Sanatorium whilst in their prime, and many were supplied to other of the Committee's Institutions.

In the autumn and winter a much larger acreage was prepared, and this year there is every prospect of a very large yield of both potatoes and vegetables.

During the year steady progress has been made with the various works in hand at the completion of 1913. Unfortunately, however, owing to the War, progress has been very slow, and no part, with the exception of the small bathrooms attached to the former Isolation Block, is yet complete.

(1) The Dining Hall and Recreation Rooms, well in hand at the end of last year, are now complete, with the exception of the furniture, and sterilising plant for the crockery, etc.

(2) The new Male Block is also completed, except for the electric lighting, water connections, and a small portion of the wood block flooring.

(3) The new Female Block is in practically the same condition as the last-named.

(4) The Doctors' and Nurses' quarters are only waiting for decorating and furniture.

(5) The Bowling Green was completed in the early part of this year, and opened on June 15th by the Hospital Committee. It has the makings of a very excellent green, though, of course, it still requires a good deal of attention. It is, however, very good for its first year, and a source of great enjoyment to the male patients.

The extension of the Laundry, Engine House, etc., is well in hand. The Laboratory Examination Room and Dispensary Block has just been commenced.

The last item, to which I drew special attention last year, namely, the Sewage, still requires to be tackled. There have, I know, been special reasons for the delay, but it is particularly unfortunate, as it is this matter which is most likely to prevent the opening of, at any rate, a portion of the new buildings in the course of the next few weeks.

Before concluding, I should like to draw attention to several matters which still require attention.

(1) The provision of additional cooking appliances in the Main Hospital Kitchen. This will be absolutely essential if the catering for 200 more people is to be efficiently carried out. Certain suggestions have been made as to what will be required, but I do not think any steps have been taken in the matter up to the present time.

(2) The provision of a Croquet Ground for the female patients :—

For the men a Billiard Table and a Bowling Green have been provided, but nothing whatever for the women. This is not unnaturally a very serious grievance. Fortunately it is one that can be very easily remedied. There is a large triangular piece of land situated in front of the women's shelter. This, if drained, levelled, and turfed, would make an excellent Croquet Lawn. That this would prove an acceptable form of recreation we know, for originally these patients had a large Croquet Lawn, and some became very skilful players. This lawn was taken over for the new Dining Hall. If this work were taken in hand in the early autumn, it should be ready for play next summer.

MANCHESTER SANATORIUM.

ABERGELE.

During the year ending 31st March, 1915, there have been no extensions to the existing accommodation at the Sanatorium.

The average number of patients treated daily at the Sanatorium was 51.

At the end of March, 1915, the Sanatorium completed the third year of its existence.

To the end of March, 1914, 138 cases had been discharged.

The after history of 79 of these cases is known at the present time, as shown in the table :—

	Well and Working.	Ill-health.	Dead.	
Class I.	12*	—	—	
,, II.	4	—	—	
,, III.	5	8	29	
	21	8	29	Total 58
Children..	Well, 19	—	—	,, 19
,,	Dead, 2	—	—	,, 2
				Total 79

* 2 Years, 8 cases.

In all the adult cases Tubercle Bacilli were present.

No cases are included in which the diagnosis rests merely on a positive Tuberculin reaction.

In considering the value of statistical evidence brought forward in support of this or that method of treatment, one should remember :—

1. That no two of the cases treated are alike in the extent or the virulence of the disease.

2. The duration of life of untreated Pulmonary Tuberculosis is very variable.

3. Years must elapse and great care and patience must be exercised in the classification of the cases before any conclusion of value can be drawn.

4. The personal equation again enters so largely into the question, that the results obtained, useful in conveying conviction to the observer, are generally of little use in convincing others.

5. The testimony based on the experience of a conscientious, capable, and truthful observer is much more valuable than statistical evidence.

During the year ending 31st March, 1915, 163 cases have been under treatment in the Sanatorium, classed as follows :—

Stage I.—42. Tubercle Bacilli found, 8 cases.
„ II.—15. „ „ 13 „
„ III.—65. „ „ 62 „
Observation cases, 41.

Twenty-four children have been under treatment during the last year, 10 being cases of Surgical Tuberculosis, and 2 of Pulmonary Tuberculosis, the remaining 12 being doubtful cases of Active Tuberculosis.

There have been 23 cases in which the physical signs were those of Chronic Bronchitis, and in 8 of these cases Tubercle Bacilli were found.

Other diseases which have been found present include 1 case of Aortic Aneurism, 2 cases of Heart Disease, 2 cases of Infectious Granuloma, 1 case of Chronic Pancreatitis and Movable Kidneys, and 1 case of Thyroglossal Cyst.

One case gave a positive Widal reaction.

Abergele Expenditure.

The statement now submitted shows the main points of importance in the expenditure incurred on account of the Abergele Sanatorium for the twelve months ending 31st March, 1915 :—

Daily average number of patients	51
Resident Staff	17
	68

	£	s.	d.
Total Expenditure, not including Interest and Sinking Fund Charges	4,740	5	5
Less Receipts	665	9	6
	£4,074	15	11
Interest and Sinking Fund Charges	1,067	9	1
Total Expenditure, including Interest and Sinking Fund Charges, but not deducting Receipts	5,807	14	6
Cost of Provisions	1,676	12	0
Cost of each patient per week, not including Interest and Sinking Fund Charges, and not deducting Receipts	1	15	7
Cost of each patient per week after deducting Receipts	1	10	7½
Cost of Provisions per head per week for patients and staff combined	0	9	5¾
Cost of each patient per week other than Food	1	6	1¼
Cost of each patient per week, including Interest and Sinking Fund Charges	2	3	7¼

In considering this statement it is necessary to remember the following points :—

1. The average number of patients being small, the cost per head is necessarily higher than in institutions with larger accommodation.

2. A building adapted as a Sanatorium is more expensive to maintain than one built for the purpose.

3. The distance of the Sanatorium from a railway station (three miles), and the long distance from a big market centre.

4. The heavy items for Interest and Sinking Fund Charges includes the cost of purchase of the estate, nearly 300 acres.

Artificial Pneumo-Thorax.

We have now had 18 months experience of this treatment, and have obtained much information as to its value and scope.

Twenty-nine cases have been or are under treatment at the present time.

Of these 1 would fall under Stage I. of the "Turban Gerhardt" classification, 5 more advanced cases under Stage II., and 23 were advanced cases, Stage III.

The majority of the cases had one-sided lesions, a few had lesions of the opposite lung.

Adhesions.—Fifteen of the cases were free from pleural adhesions. Slight adhesions not markedly affecting the success of the operation were present in 4 cases.

Severe adhesions, allowing only a very partial pneumo-thorax, were present in 2 cases, and in 4 cases treatment was discontinued on account of the injurious effect on lesions which were present in the opposite lung.

To what extent does pneumo-thorax extend the value of Sanatorium treatment?

An analysis of the figures for the year ending 31st March, 1915, reveals the following facts:—

STAGE III.

	Per cent.
Sixty-five advanced cases were admitted to the Sanatorium.	
Pneumo-thorax was induced in 21 cases	32·3
Five cases were abandoned owing to adhesions found	7·7
Two cases were abandoned owing to condition of opposite lung	3·1
Working capacity restored in	21·5

Time alone will show how far the recovery is permanent.

Case VII. is particularly noteworthy. He was a very advanced case, under a private doctor for three years.

Five months after his discharge from the Sanatorium, and after working five months on a lathe turning shell cases from 6 a.m. to 8 p.m., his doctor wrote informing me that he had never seen the man in such good condition.

This case is worth noting, for:—

1. He had been under Sanatorium treatment in 1913, and ceased work three months after.
2. There is the testimony of his medical man, who has known him for three years.

Conclusions.

We are justified, I think, in drawing certain conclusions from our treatment up to the present time.

Firstly.—That with good technique and in careful hands, the operation is practically free from danger, granted that the case chosen is a suitable one.

The fact that our patients travel from Manchester to the Sanatorium to receive their injection, and return the same day, is sufficient evidence on this point.

The choice of case is a most important factor, and one in which experience helps enormously.

All cases should be ruled out that show anything but the slightest lesions in the opposite lung.

This, at any rate, is true of working-class patients, who have to return to city life after a comparatively short stay at the Sanatorium.

A statement has been made by some authorities that pneumo-thorax has beneficial effect on lesions of the opposite lung. Such is not my experience.

Secondly.—No case should be done in which there is the slightest Cardiac affection.

Thirdly.—Before starting the operation it is very advisable to have an X-ray examination of the case.

Complications.—So far complications have been conspicuous by their absence.

Pleural effusion, so frequent in some workers' experience, strangely enough I have not yet experienced, and eighteen months have elapsed since some of my cases were first treated.

Occupations being discharged at present by patients in whom pneumo-thorax has been established :—

1. Fitter.
2. Printer.
3. Mason.
4. Porter.
5. Van Driver.
6. Lamplighter.
7. Coffin Maker.
8. Clerk.
9. Nurse.

The following is a list of the cases which have been under treatment of the pneumo-thorax :—

Case 1.—E. H. April, 1915. Well and working. T.B. in sputum. Last injection February, 1914.

Case 2.—J. O'D. T.B. in sputum. Treated for twelve months, twenty-two injections. Well and working twelve months after leaving Sanatorium (June, 1914.)

Case 3.—T. W. Dead.

Case 4.—J. T. Treated for ten months. An unsatisfactory case, not on account of the lung condition, but through the mental condition produced by recurrent Sanatorium treatment.

Case 5.—*See* Annual Report I.

Case 6.—J. L. T.B. in sputum. Twenty-one injections in ten months. Well and working in April, 1915. Discharged from the Sanatorium in September, 1914, and returned for injections at intervals. In January, owing to accident, could not appear at the stated time. Lung became adherent to Pleura.

Case 7.—F. B. Extensive disease L. Lung. Cavity. T.B. in sputum. has been treated for ten months, and is still returning at intervals for injections. Well and working, making shells for his country since November, 1914.

Case 8.—F. C. Infiltration left lower lobe. Seventeen injections in nine months, and still under treatment. Has been working on the railway since December, 1914.

Case 9.—F. C. Extensive disease. C. cavity R. Lung. T.B. in sputum. Under treatment for nine months, and returns to the Sanatorium at intervals for injections. Sixteen injections. Left Sanatorium in November, 1914. Well in April, 1915.

Case 10.—J. F. Treatment abandoned owing to total adhesions.

Case 11.—C. M. Extensive disease R. Lung. T.B. in sputum. Treated for six months; twelve injections, and then removed out of Manchester area. Left Sanatorium in December, 1914, and is well and working in April, 1915.

Case 12.—G. M. Severe lesion R. Lung. T.B. in sputum. Treated since September, 1914, and still returns at intervals to receive injections. Discharged from Sanatorium on 6th January, 1915, and is working at his old trade (printing) in April, 1915.

Case 13.—G. S. Severe disease L. Lung. T.B. in sputum. Treated since May, 1914. Seventeen injections, and still returns at intervals to receive them. Now working as a lamplighter. Discharged from Sanatorium in July, 1914.

Case 14.—F. W. Treatment abandoned after two months, owing to bad effect on lesion in opposite lung.

Case 15.—W. A. Wireless Operator. Severe lesion right upper lobe. T.B. in sputum. Eleven injections. Discharged from Sanatorium 27th January, 1915, and returns at intervals for treatment. April, 1915, condition very good.

Case 16.—W. B. Treatment abandoned owing to extensive pleural adhesions.

Case 17.—L. B. Severe disease R. Lung. T.B. in sputum. Under treatment since January, 1915. Ten injections, and has done well.

Case 18.—E. B. Abandoned on account of lesions in opposite lung.

Case 19.—O. C. Abandoned owing to adhesions.

Case 20.—G. G. Extensive disease L. Lung. T.B. in sputum. Under treatment one month, and doing well.

Case 21.—A. H. Extensive disease L. Lung. T.B. in sputum. Under treatment one month, and doing well.

Case 22.—J. H. Severe lesion R. Lung. T.B. in sputum. Treated for six months, and received fourteen injections. Left Sanatorium in November, 1914, the picture of health. A month later acute symptoms appeared, probably non-tubercular. Treatment was discontinued.

Case 23.—B. L. Severe disease R. Lung. T.B. in sputum. Treated since June, 1914; received fifteen injections, and returns to Sanatorium at intervals to receive them. April, 1915, the opposite lung is sound, and the patient is working.

Case 24.—M. C. Cavity in R. Lung and upper half of lung adherent. Partial pneumo-thorax induced. T.B. in sputum. Received fifteen injections, and returns at intervals. Left Sanatorium in February. Well and working in April, 1915.

Case 25.—G. McL. Extensive disease R. Lung. Large focus in left upper lobe. T.B. in sputum. Fourteen injections; six months' duration. Produced a remarkable change in condition, and in this case the disease in opposite lung has not increased.

Case 26.—M. A case with a localised lesion in right upper lobe. T.B. in sputum. A pneumo-thorax was decided upon owing to short duration of Sanatorium treatment possible. Total adhesions were found, rendering operation impossible.

Case 27.—J. P. Scattered disease L. Lung c. vomica. Four months' treatment. Discharged fit for work, to return at intervals for injections.

The Value of X-Rays.

During the last two years I have had more than fifty cases X-ray'd by Drs. Bythell and Barclay, and have thus had the opportunity of comparing the reports of an expert radiographist on the cases with a knowledge of the clinical facts.

Further, these cases were under my observation for a considerable time, and the present condition of the majority of them is known to me.

The conclusions which I draw from my experience are perhaps worth putting on record.

1. The X-ray is a valuable aid to clinical examination.

It shows pathological changes in the lung tissue which, in conjunction with a clinical knowledge of the case, enable one very frequently to determine the tubercular or non-tubercular nature of the case.

2. Slight lesions in certain parts of the chest are apt to be overlooked by the X-ray.

For example. A case on clinical examination showed some slight physical signs at the left base on admission.

The right lung was extensively diseased.

After a few weeks the left lung, on clinical examination, seemed to be clear.

Strengthened with a further X-ray report, a pneumo-thorax was induced on the right side.

After four weeks' treatment, in which seven injections were given, the treatment was discontinued on account of physical signs in the left base and some constitutional disturbance.

Again, the case of J. P. Clinical signs showed a cavity situated in the region of the anterior margin of the left lung.

The diagnosis of cavity was made by several competent observers.

The X-ray showed nothing after two examinations.

The explanation may be that the X-ray opinion was correct; that the cavity was hidden behind the shadow of the heart, which was, I think, probable; that the X-ray for some reason failed to reveal the cavity which clinical signs revealed to be present.

The point is worth mentioning, as it shows how futile it is to rely on any one method of examination.

3. I have kept close observation on the X-ray reports with a view to determine whether the X-ray is a reliable factor in determining the quiescence or activity of the disease.

Frankly, my opinion is that the X-ray is valueless from the point of view of determining the quiescence or activity of the disease.

The following is a case in point:—

> H. R., a woman aged 29, employed in an institution, was admitted in March, 1914, with a history of recurrent colds and cough.

In both lungs the percussion note was good.

In the upper lobe of the right lung down to the fourth rib there were areas of harsh breathing and areas of deficient entry of air.

Along the posterior border of the lung to the inferior angle of the scapula the entry of air was not good, and there were small areas in which the breathing was of a harsh type.

After three weeks the case was discharged, the clinical opinion being that the signs were those of old-standing quiescent disease, and that the case was not one for Sanatorium treatment.

The X-ray opinion, on the strength of X-ray photographs alone, was that the prognosis was bad, as X-ray showed extensive lesions at the roots of both lungs, with irregular infiltration of the right upper lobe.

This case was personally examined by me twelve months later, and her condition had not altered since she left the Sanatorium.

She had maintained working capacity, and was quite well.

The case was worth putting on record and keeping under observation as far as possible, on account of the fact that without doubt here was a case in which nature had overcome an extensive lesion.

4. For the proper control of pneumo-thorax operations the X-ray is essential.

My opinion is that pneumo-thorax operations, uncontrolled by X-ray work, are certain to give rise to erroneous and misleading conclusions.

The value of X-ray is clearly shown by the following case :—

J. S., Clerk, aged 42, admitted to the Sanatorium in August, 1912, with a reliable history of hæmoptysis, which, taken with his condition, cough, and loss of weight, pointed to early Phthisis.

Over the left apex of the inner margin of the lung the only physical sign was a harsh breathing with a slight loss of resonance.

There was neither cough nor sputum.

The evidence of Tuberculosis was never conclusively proved, and the case was treated as suspicious, and at the end of four months the patient was discharged, having put on two stone in weight and looking the picture of health.

The patient was again admitted in January, 1915, with again the most reliable evidence of hæmoptysis and cough.

Examination showed the same harshness and breathing at the left apex, and slight dulness along the sternal margin over the first and second ribs.

The heart was found to be enlarged, the apex behind the sixth rib, the venticle extending to the nipple line.

Reference to his previous case sheet showed that the enlargement had taken place within the last two years.

The heart impulse was strong, but there was no definite pulsation. There was a suspicion of tracheal tugging.

Accordingly an X-ray was decided upon, and revealed a general enlargement of the aorta and a small saccular aneurism at the junction of the arch and descending aorta.

5. There is no doubt, in conclusion, that the X-ray, by acting as a critic of one's clinical work, leads to much greater accuracy, and the expense incurred by an X-ray examination is refunded in the assistance it gives to the clinician in eliminating unsuitable cases.

REPORT BY MR. A. T. ROOK, SUPERINTENDENT OF THE SANITARY DEPARTMENT.

Sanitary Department,
Town Hall, Manchester.

In presenting to the Medical Officer of Health the report of the work transacted in the Sanitary Department for the year ending 31st March, 1914, I beg to state that the City, for inspection and other purposes, is divided into 33 Districts, to each of which one Sanitary Inspector has been assigned.

In addition to these, there is a Superintendent, a Deputy Superintendent, one Chief Inspector, two Drainage, five Smoke, one Canal Boats, two Lodging-house, three Adulteration of Food, one Milkshops, six Factory and Workshops Inspectors, including two Female Inspectors, and two Drain Examiners. There is also a staff of 28 Clerks for clerical and other work.

In the House Drainage Department there is also a Manager, ten Clerks and eight Clerks of Works for supervising and measuring up work done by the contractors employed by the department in carrying out private drainage work.

The number of complaints of nuisances of various kinds made during the year was 4,267 :—

2,028 through the Medical Officer of Health's Department.

2,217 by the public.

22 through the Police.

HOUSES LET IN LODGINGS.

Under the powers given by Section 90 of the Public Health Act, the bye-laws made thereunder have been enforced.

The number of houses on the register is 2,069. To these, 10,087 day visits and 389 night visits have been paid. 242 infringements of the regulations have been reported and dealt with.

DAIRIES, MILKSHOPS, AND COWSHEDS REGULATIONS.

Under this Order, which was made in July, 1879, and the Regulations thereunder in 1896, 3,329 milkshops and dairies and 67 cowkeepers are now on the register. The number of cows kept is 951. The number of visits to dairies, milkshops, and cowsheds was 2,950. Twenty-three infringements of the regulations have been reported and dealt with.

The number of ice cream manufacturers on the Register is 479. The number of visits was 894. One infringement of the regulations has been reported and dealt with.

WORKSHOPS, BAKEHOUSES, SHOPS ACTS, AND ORDERS MADE THEREUNDER.

Workshop Acts

During the year the Factory and Workshop Act of 1901 has received the careful attention of the 4 Male and 2 Female Inspectors specially appointed for the duties, the Female Inspectors devoting a large portion of their time to visiting the 3,043 houses of outworkers in the City.

Means of Escape in case of Fire

Provision for the means of escape in case of fire in factories and workshops has also received attention, and all known cases of danger have been dealt with.

Periodical changes will, of course, from time to time take place in various ways which will bring buildings within the meaning of the Act, and necessitate the constant supervision of the Inspectors and action on the part of the Authorities.

Bakehouses

The number of bakehouses in the City is 560; of these 50 are situate in basement premises, and special attention has been given to them.

Shops Act

The Shops Act, which came into force on the 1st May, 1912, has received attention, registers of all shops having been prepared. Orders of Exemption from compulsory closing have been made in 33 trades, and in three cases Orders fixing the day for closing have been made after the opinions of the occupier of the several classes of shopkeepers had been ascertained.

Outworkers

Many visits have been paid to houses in various parts of the City in which out-work is carried on, as will be seen on reference to the following tabulated statement, but constant visitation is necessary to maintain the standard of cleanliness which is to be desired, especially in houses in which shirt-making, handkerchief-hemming, brace-making, and umbrella-covering, etc., is done.

The people, as a rule, appear willing to carry out any suggestion made by the Inspectors to keep their houses clean; but at the same time it is almost impossible for small houses, sometimes containing large families, to be kept in such a satisfactory condition as workshops.

The work done under the above Acts is shown in the following tables :—

SHOWING THE WORK DONE BY THE INSPECTORS UNDER THE SHOPS ACTS, AND THE FACTORY AND WORKSHOP ACTS.

Number of District.	INSPECTOR	SHOPS					WORKSHOPS					Factories and Workshops not provided with proper means of escape in case of fire	BAKEHOUSES					OUT-WORKERS	
		Number visited	Number of infringements reported		Number newly registered	Number struck off register	Number visited	Number of premises in which the Sanitary arrangements were found defective	Number of reports referred to H.M. Inspector of Factories (unregistered factories, &c.)	Number newly registered	Number struck off register		Number visited	Number of premises in which the Sanitary arrangements were found defective	Number of reports referred to Factories Inspector	Number newly registered	Number struck off register	Number of visits to houses where out-workers are employed	Number of houses found dirty.
			Shops Act	Employment of Children Act															
1	Richard Tolson	1169	9	8	363	91	2230	196	25	102	88	8	310	31	...	...	3	...	...
2	Thos. Partington	1649	...	13	570	159	2221	134	9	91	78	18	534	29	...	5	9	...	...
3	George Vernon	1298	24	20	383	155	2208	207	54	168	174	25	426	56	...	6	4	...	...
4	Francis J. Rowe.................	1491	15	15	390	165	2561	190	55	158	174	7	536	35	...	2	1	3	...
...	(Miss) Emma Coppock.........	2335	...	4	57	31	1559	77	...	...	15	...	...	...	...	...	...	1506	64
...	(Mrs.) Rosa G. Clift	538	4	12	57	26	566	18	...	...	12	...	...	...	...	...	...	5047	18
	TOTALS	8480	52	72	1820	627	11345	822	143	519	541	58	1806	151	...	13	17	6556	82

Totals on Registers—Shops, 20,671; Workshops. 4,404; Bakehouses, 560.

Showing the number and classification of persons employed as Outworkers by firms within the City, and the number of such firms.

Trades	No. of Employers	No of Outworkers or Contractors employed
Makers of Wearing Apparel	442	2789
Button Carding	1	4
Cabinet Makers and Upholsterers	6	15
Cleaning and Washing	1	1
Fent Sorters	2	14
Fur Workers	2	19
Hair Pad and Frame Makers	2	3
Handkerchief Hemmers	22	221
Lace, Lace Curtains, and Nets	2	6
Opticians	1	1
Paper Bags and Box Makers...	3	10
Quilt, Cushion, &c., Makers	2	18
Umbrella Trimmers...	21	284
Window Blinds	1	1
Totals	508	*3386

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*3043 of these are in the City, the remainder are in the districts of other Local Authorities, to whom lists showing the names and addresses have been sent.

SHOWING THE PROCEEDINGS TAKEN UNDER THE PROVISIONS OF THE ADULTERATION OF FOOD AND DRUGS AND THE MARGARINE ACTS.

Article	Number of Samples obtained	Number Adulterated	Number not Adulterated	Number Summoned before Magistrates	Number Fined	Number ordered to pay Costs only	Number Dismissed or Withdrawn	Amount of Fines Imposed	Amount of Costs ordered to be Paid
rrowroot and Corn Flour	14	...	14	...	...	...	...	......	......
aking Powder....................	12	...	12	...	...	...	...	......	......
eer	76	...	76	...	...	...	...	......	......
read	38	...	38	...	...	...	...	......	......
utter	441	5	436	4	2	1	1	5 7 6	2 15 6
amphorated Oil	4	...	4	...	...	...	...	......	......
astor Oil	7	...	7	...	...	...	...	......	......
heese	31	...	31	...	...	...	...	......	......
ocoa	38	...	38	...	...	...	...	......	......
od Liver Oil	9	...	9	...	...	...	...	......	......
offee	121	1	120	1	1	...	...	0 10 0	0 19 6
onfectionery and Mincemeat ...	64	...	64	...	...	...	...	......	......
ream and Preserved Cream	61	...	61	...	...	...	...	......	......
rugs	94	...	94	...	...	...	...	......	......
lour	37	...	37	...	...	...	...	......	......
ams	38	...	38	...	...	...	...	......	......
etchup and Sauces..............	18	...	18	...	...	...	...	......	......
ard	79	...	79	...	...	...	...	......	......
argarine	28	...	28	...	...	...	...	......	......
eat (tinned and prepared)	25	...	25	...	...	...	...	......	......
ilk	1209	59	1150	59	36	11	12	66 0 6	61 7 7
ilk (skimmed).....................	7	...	7	...	...	...	...	......	......
ilk (condensed)	2	...	2	...	...	...	...	......	......
ineral Waters, Cordials, &c. ...	50	...	50	...	...	...	...	......	......
ustard	20	...	20	...	...	...	...	......	......
atmeal	27	...	27	...	...	...	...	......	......
live Oil	2	...	2	...	...	...	...	......	......
earl Barley	7	...	7	...	...	...	...	......	......
epper	33	...	33	...	...	...	...	......	......
ickles	10	...	10	...	...	...	...	......	......
aspberry Vinegar	1	...	1	...	...	...	...	......	......
ice, Tapioca, &c..................	39	...	39	...	...	...	...	......	......
hrimps	2	...	2	...	...	...	...	......	......
pices	22	...	22	...	...	...	...	......	......
pirits	261	1	260	1	1	...	...	2 0 0	1 0 6
ugar	1	...	1	...	...	...	...	......	......
ea	58	...	58	...	...	...	...	......	......
reacle and Golden Syrup.........	12	...	12	...	...	...	...	......	......
inegar	13	...	13	...	...	...	...	......	......
ines	18	...	18	...	...	...	...	......	......
Totals	3029	*66	2963	65	40	12	13	73 18 0	66 3 1

* In one of these cases no Magisterial proceedings were taken, a sample of Butter being taken informally.

In addition to the above, 627 samples of Milk have been procured from Farmers' cans by the Sampling Officers for bacteriological examination under the Milk Clauses of the Manchester General Powers Acts, and also 19 Samples of Water have been procured for bacteriological examination.

Fertilizers and Feeding Stuffs Act, 1906.

Twenty-four samples were procured under this Act, which were submitted to Professor Delépine for analysis, one of which was reported on as adulterated.

SMOKE NUISANCES.

For the abatement of smoke nuisances, the five Inspectors appointed specially for this work have taken 582 timed observations of half-an-hour each, with the result that 65 notices for the abatement of nuisances have been served. Proceedings before the Magistrates have been ordered in 101 cases out of 193 offences reported. These cases were disposed of as follows:—

Eighty-nine were summoned before the Justices, and in 68 instances fines were imposed amounting to £159 14s., and costs £36 16s. 6d. Six were ordered to pay costs only.

Nine orders of abatement were granted and served, 6 cases were excused, dismissed, or withdrawn.

Much attention during the past year, as will be seen by the above, has been given to the nuisance caused by the emission of black smoke, not only from the furnaces connected with boilers in mills, warehouses, and other works, but also from chemical and other industries, and the efforts made have already resulted in a considerable reduction of the nuisance.

Chimneys of firms in adjoining districts have also been observed in regard to smoke nuisances, and communications sent to the Authorities concerned.

CANAL BOATS ACTS.

The number of canal boats on the register is 407.

The number of inspections made was 2,187, resulting in five infringements of the Acts being discovered, which were referred to the Justices to be dealt with.

Caution notices were sent to the owners or masters of 55 boats.

OFFENSIVE TRADES.

The number of offensive trades on the register is 975. These have been placed under close supervision, and periodical visits paid.

UNHEALTHY DWELLINGS.

During the year, 1,176 houses were certified to be dealt with by the Sanitary Committee.

Of these, 1,142 were ordered to be closed, and 34 were adjourned.

In the majority of these the owners arranged to make alterations to meet the requirements of the Corporation.

Prosecutions for Offences, with Results.

Description of Offence	Number of Summonses taken out	Number of Persons Fined, with Costs	Number of Persons ordered to pay Costs only	Number adjourned	Number Excused, Dismissed, or Withdrawn	Amount of Fines Imposed			Amount of Costs ordered to be Paid		
						£	s.	d.	£	s.	d.
Did not affix notice in shop as to Assistants' Weekly Half-holiday	7	7	..	..	..	1	10	0	1	10	0
Did not close shop for serving customers one half-day per week	13	12	1	..	..	13	6	0	4	5	0
Did not allow Assistants to have Half-holiday	7	7	..	..	..	4	5	0	3	7	6
Hairdressers' Shops open in contravention to the "Closing Order"	5	5	..	..	..	1	5	0	1	9	0
Having bakehouse in a dirty state	1	1	..	..	..	0	2	6	0	2	6
Using bakehouse not certified by Local Authority as being suitable for the purpose	1	1	..	..	..	0	5	0	0	5	0
Neglecting to allow Assistants interval for meals	27	4	..	..	23	2	10	0	2	0	6
Neglecting to provide satisfactory means of escape in case of Fire after notice ..	2	..	..	2	..		..			..	
Not having fixed in shop Abstract of Act *re* employment of young persons.. ..	2	1	1	..	..	0	2	6	0	9	0
Not forwarding lists of outworkers to the Department	13	..	12	..	1		..		2	4	6
Employing young persons over 74 hours per week	1	1	..	..	..	1	0	0	0	9	0
Total..	79	39	14	2	24	24	6	0	16	2	0

PARTICULARS RELATING TO THE OPERATIONS OF THE CLEANSING DEPARTMENT.

The Medical Officer of Health is indebted to Mr. Williamson, Superintendent of the Cleansing Department, for the following particulars relating to the operations of the Cleansing Department during the year ending 31st March, 1915.

Cleansing Department,
Town Hall, Manchester,
July, 1915.

Dear Sir,—There are within the City (exclusive of the District of Withington, but inclusive of Gorton and Levenshulme) 1,710 pail-closets; 24,677 ash-boxes; 121,191 ash-bins; 157 midden-privies; 91 wet middens; 457 dry middens; 171,934 water-closets at dwelling-houses; and 5 cesspools. The pail-closets are systematically emptied at regular intervals—once, twice, or thrice weekly, as necessity demands. The middens are emptied as required, The contents of the pail-closets are taken to Holt Town and Water Street. At Holt Town the fæcal matter is dried into concentrated manure. The dry refuse is consumed in the Galloway boilers, and generates the steam required for working the machinery. The worthless fine ash, which cannot be consumed, is deposited at the nearest tip at Clayton Vale. The privy refuse and fæcal matter, taken to Water Street, is sent away in its crude state as nightsoil to Carrington and Chat Moss Estates. Dry combustible matter is passed into the destructor furnaces or the Galloway boilers at Water Street, and there destroyed. A quantity of fine ash at Water Street is used as an absorbent for the fæcal matter from the pail-closets.

The market garbage, of which we have 4,814 tons per annum, is carted to Water Street, and destroyed in the furnaces or sent to the Committee's Estates. Slaughter-house refuse is collected from the abattoirs and private slaughter-houses and sent to Holt Town, where it is passed through dryers, and the dry material is then added to the concentrated manure. Street sweepings are generally deposited at the nearest depôt, and afterwards carted to Water Street Depôt and Ardwick Sidings, from whence they are despatched to farmers or to the Committee's Estates.

The total quantity of material collected by this Department during the past year amounted to 311,324 tons.

Within the City there are 35 destructor furnaces and 20 boilers, and last year 8,483 tons of mortar were made from the clinker obtained from such furnaces.

About 56 "orderly" youths and men are employed to collect horse-droppings and litter from the streets, and deposit the same in the bins fixed in the footpaths. The contents of the bins are removed twice daily and taken to the nearest depôt.

There is a staff of about 54 men engaged specially upon the work of cleansing passages. They regularly, at least once a week, cleanse the back passages in certain districts, and during last year 417,766 swillings and cleanings were effected in courts and passages.

During the year, 103,597 barrels of water were used in degging the streets, and 430,802 grids were unstopped.

During the past 22 years we have deposited upon the various tips within the City the following quantities of material, viz.:—In 1892, 99,866 tons; 1893, 109,078 tons; 1894, 103,949 tons; 1895, 113,836 tons; 1896, 107,883 tons; 1897, 99,658 tons; 1898, 96,635 tons; 1899, 104,481 tons; 1900, 95,138 tons; 1901, 64,781 tons; 1902, 117,619 tons; 1903, 180,985 tons; 1904, 141,999 tons; 1905, 118,093 tons; 1906, 109,446 tons; 1907, 134,072 tons; 1908, 120,581 tons; 1909, 123,183 tons; 1910, 127,409 tons; 1911, 107,742 tons; 1912, 102,190 tons; 1913, 89,909 tons; 1914, 99,800; and in 1915, 97,370 tons. The bulk of this material was deposited on the tips at Clayton and Harpurhey, and on Carrington and Chat Moss Estates. It is composed principally of dry ashes, clinkers, and street sweepings. During last year 22,594 tons of material was sent to Carrington Estate and 48,567 to Chat Moss Estate.

Yours faithfully,
R. Williamson,
Superintendent.

Dr. Niven,
Medical Officer of Health,
Town Hall, Manchester.

WITHINGTON COMMITTEE.

REPORT FOR THE YEAR 1914 OF THE DISTRICT MEDICAL OFFICER OF HEALTH,

Dr. W. St. C. McClure.

Area of the District in Acres	5,773
Population 1911 (Census), exclusive of Workhouse	49,140
Population 1914 (estimated to middle of year)	55,572
General Death-rate per thousand Population..	11·3
Infant Death-rate per thousand Births	78·9
Birth-rate per thousand Population..	17·7

I beg to submit the following statement as to the health of the Withington District of Manchester during the past year.

Population.—The population of the district in June, 1914, was estimated at 55,572, distributed over the several townships as follows:—

Withington (including Whalley Range)	21,721
Didsbury	13,114
Chorlton-cum-Hardy	17,075
Burnage	3,662
	55,572

Area.—The area is 5,773 acres.

Density.—The mean density of the population, *i.e.*, the number of persons to each acre, is 9·6.

Births.—The total number of births was 988, which gives a birth-rate of 17·7, compared with 19·3 in the previous year. The natural increase, or gain by excess of births over deaths, was 356, as against 570 in 1913.

Deaths.—The total number of deaths recorded was 632—292 males and 340 females. Of these, 514 were of residents within the district, 56 of residents in the South Manchester Infirmary, and 62 of residents in localities outside the district.

Calculated on the above figures, the death-rate for the year was 11·3. This is somewhat higher than the figure for last year, and the increase is accounted for by the fact that for the first time a considerable number of deaths of residents occurring in institutions outside the Withington area have been apportioned to this district.

	Births	Deaths	Birth-rate	Death-rate
Withington (including Whalley Range) .	404	216	18·5	9·9
Didsbury	198	171	15·0	13·0
Chorlton-cum-Hardy..	313	219	18·3	12·7
Burnage	73	26	19·8	7·1

The main causes of death were Tubercular Diseases 54, Cancer 75, Pneumonia 46, other Diseases of the Respiratory System 47, and Heart Diseases 71. There were 10 deaths attributed to Alcoholism, Accidents were responsible for 10, and Suicide for 5.

In the age-period 1–5, the chief causes of death were Whooping Cough (8), Tubercular Diseases (9), Pneumonia (6), Scarlet Fever (4).

In the following table are given the annual rates of mortality from certain diseases and groups of diseases :—

Table I.—Death-rates per thousand from the principal diseases, 1905 *to* 1914.

NAME OF DISEASE	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Measles	0·18	0·10	0·05	0·31	0·02	0·06	0·02	0·13	0·09	0·08
Scarlet Fever ...	0·02	...	...	...	0·12	0·02	0·10	0·09	0·05	0·16
Whooping Cough	0·05	0·05	0·20	0·20	0·04	0·06	0·20	0·15	0·07	0·16
Diphtheria & Membranous Croup	0·10	0·15	...	0·11	0·08	0·10	0·06	0·07	0·05	0·08
Enteric Fever ...	0·05	...	0·07	0·04	0·02	0·02	...	...	0·03	0·01
Epidemic Influenza	0·28	0·20	0·17	0·18	0·36	0·12	0·20	0·11	0·14	0·14
Diarrhœa	0·21	0·43	0·10	0·31	0·15	0·06	0·44	0·11	0·13	0·17
Phthisis	0·52	0·89	0·97	0·72	0·67	0·56	0·80	0·65	0·65	0·64
Other Tubercular Diseases	0·23	0·38	0·37	0·47	0·32	0·37	0·35	0·28	0·28	0·32
Cancer, Malignant Diseases	0·84	0·71	0·70	0·79	0·71	0·83	1·00	0·96	0·76	1·34
Diseases of the Respiratory Organs	1·73	1·79	1·77	1·24	1·56	1·31	0·79	1·60	1·19	0·84
Alcoholism, Cirrhosis of Liver	0·13	0·15	0·22	0·09	0·28	0·20	0·10	0·13	0·14	0·17
Heart Diseases ...	1·21	1·07	1·40	1·35	1·69	1·23	1·37	1·60	1 32	1·27

Infantile Mortality.—During the year 78 deaths of infants under one year occurred. This corresponds to an annual Infantile Mortality rate per 1,000 births of 78·9. The mean for the past 10 years was 86.

The following table shows the varying rates for the several townships for the years 1904–1914 :—

Infantile Mortality-rates per thousand births, 1904-1914.

TOWNSHIP	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Withington	110	89	96	107	88	80	78	94	72	78	84
Didsbury	93	66	144	76	123	56	57	70	69	74	50
Chorlton-cum-Hardy ..	105	67	104	79	107	70	82	89	52	61	77
Burnage	104	164	145	109	160	156	47	80	69	97	137
WHOLE DISTRICT ..	94	85	113	91	106	76	72	87	64	73·7	78·9

As is seen from Table II., 62 per cent. of the deaths of infants occurred within the first three months of life. What may be regarded as "antenatal causes" (indicated by prematurity, congenital defects, atrophy, and some cases of convulsions and lung diseases) were responsible for about 30 per cent., diseases of the respiratory system for 26 per cent., and Diarrhœa for 10 per cent.

The mortality amongst illegitimate infants was 428 per 1,000 born. This figure, however, is misleading, in that out of 35 illegitimate children born in the district 5 only died, giving a rate of 143. The remaining deaths occurred among illegitimate infants born outside but resident within the district at the time of death.

Table II.—Causes of deaths under 5 *years in* 1914.

	0–3 Months	3–6 Months	6–12 Months	Total under 1 year	1–2 years	2–3 years	3–4 years	4–5 years	Total under 5 years
Measles	—	—	4	4	—	—	—	—	4
Whooping Cough	—	—	1	1	5	1	1	1	9
Scarlet Fever	—	—	—	—	2	2	—	—	4
Diphtheria and Membranous Croup	—	—	—	—	—	—	1	1	2
Syphilis	1	—	—	1	—	1	—	—	2
Diarrhœa and Enteritis ..	6	1	1	8	—	—	—	—	8
Tuberculosis	—	—	2	2	5	1	1	2	11
Premature Birth	16	—	—	16	—	—	—	—	16
Atrophy	8	1	—	9	2	—	—	—	11
Congenital Defects	4	—	—	4	2	—	—	—	6
Convulsions	5	2	1	8	—	—	—	—	8
Pneumonia	1	4	3	8	4	2	—	—	14
Diseases of Respiratory System (other)	2	2	2	6	—	—	—	—	6
Brain Disorder	1	—	2	3	—	1	—	—	4
Suffocation	—	—	—	—	—	—	—	—	—
Other causes	3	—	3	6	3	1	—	—	10
Injuries	1	—	—	1	—	1	—	—	2
	48	10	19	77	23	10	3	4	117

INFECTIOUS DISEASES.

Smallpox.—No case occurred.

Poliomyelitis.—One case of this disease was notified and investigated.

Measles.—339 cases were reported. The disease was considerably less prevalent during 1914 than it has been for some years. The cases were distributed fairly evenly throughout the year, no marked epidemicity being shown.

The case mortality was 1·4 per cent., compared with 1·3 per cent. in 1913, and 1·3 per cent. in 1912.

Incidence of Measles upon children at various ages, 1914.

	0–1 years	—2 years	—3 years	—4 years	—5 years	—6 years	—7 years	—8 years	—9 years	—10 years	—11 years	—12 years	—13 years	—14 years	— over	Total
Primary Cases ..	4	15	9	37	57	59	21	6	5	3	1	—	—	1	3	221
Secondary Cases	10	42	22	14	13	3	4	5	1	2	1	1	—	—	—	118
Total ..	14	57	31	51	70	62	25	11	6	5	2	1	—	1	3	339

Whooping Cough.—242 cases of this disease were registered during 1914. The cases were evenly distributed throughout the year. Nine deaths occurred, all of which were of children under 5 years of age. The case mortality was 3·7 per cent., compared with 3·3 per cent. in 1913.

Scarlet Fever.—The following table shows the number and distribution of cases of Scarlet Fever notified during 1914, together with the number of patients removed to Hospital :—

Month	Withington	Didsbury	Chorlton-cum-Hardy	Burnage	Total	Number removed to Hospital
January	17	7	7	—	31	10
February	13	5	7	1	26	7
March..	14	5	4	—	23	15
April	8	—	5	1	14	5
May	12	4	10	1	27	13
June	12	3	10	—	25	13
July	10	5	2	1	18	8
August	3	2	4	—	9	3
September	32	3	4	1	40	22
October	48	13	5	2	68	30
November	37	13	2	5	57	30
December	15	20	3	3	41	19
	221	80	63	15	379	175

These numbers show a considerable increase on those for 1913. As will be seen from the above table, the greatest incidence of attack occurred in the last quarter of the year. It was found that the spread of infection was not due to any one discoverable cause, such as infected milk. A number of the cases were traced to infection at the elementary schools, and overlooked or unrecognised cases were responsible for much of the infection.

The attack-rate for the year was 6·8 per thousand, and the case mortality was 2·3 per cent., as compared with 2·1 for 1913 and 3·0 in 1912.

Diphtheria.—The following is the usual table relating to the distribution of Diphtheria during the year:—

Month	Withington	Didsbury	Chorlton-cum-Hardy	Burnage	Totals	Number removed to Hospital
January	3	2	1	—	6	1
February	3	4	3	—	10	6
March	4	—	3	—	7	2
April	3	1	6	—	10	1
May	1	1	3	—	5	5
June	1	—	4	—	5	1
July	2	4	2	—	8	1
August	—	—	6	—	6	3
September	1	3	3	—	7	6
October	1	—	2	—	3	2
November	1	1	6	—	8	2
December	1	—	6	1	8	—
	21	16	45	1	83	29

The attack-rate for the whole district was 1·4 per thousand, compared with 0·6 in 1913.

The case-mortality was 6·02 per cent., as compared with 8·5 per cent. in 1913.

Bacteriological Examinations.—The total number of throat swabs examined was 215; 56 with positive results, and 159 with negative.

Of the cases notified, 52 (or 63 per cent.) were examined bacteriologically at the commencement of the illness; in 40 of these Diphtheria bacilli were found.

In cases treated at the hospital, it is the custom to obtain two successive negative swabs before the patient is discharged; in the 54 cases treated in their own homes negative bacteriological results were obtained before release of the patient in 6 instances.

Diphtheria Antitoxin.—110 phials, containing 220,000 units, were supplied free to the medical profession. It is possible to obtain the remedy at the various police stations, and practitioners have availed themselves freely of this facility.

For the convenience of doctors in the Chorlton-cum-Hardy district, Diphtheria Antitoxin and outfits for bacteriological examination can be obtained at the Withington Committee's depot in Albany Road.

Enteric Fever.—Five cases of this disease were reported during the year. The average number of cases during the previous 10 years was 8. One death occurred.

Twenty-one specimens of blood were sent to the laboratory for examination, of which 2 yielded a positive Widal reaction.

The attack-rate for the whole district was 0·09 per thousand of the population, compared with 0·10 in 1913 and 0·25 in 1912.

Four cases were removed to Hospital, one case being nursed at home.

Erysipelas.—Forty-one cases of Erysipelas were notified during the year, 18 of which occurred in the Workhouse. The usual inquiries were made in each case—particularly as to whether a monthly or district nurse was in attendance—and disinfection was carried out where necessary.

Puerperal Fever.—Two cases were notified and investigated. One was removed to Monsall Hospital for treatment. In each case the bedding was stoved and the usual precautions taken to prevent the nurses carrying infection. No deaths occurred.

Ophthalmia Neonatorum.—Eight cases were notified, and each one was followed up to ascertain that the necessary treatment was being obtained. In none was the eyesight permanently affected.

Phthisis.—During the year, 36 deaths were recorded from this disease, compared with 35 in 1913 and 39 in 1912. One hundred and one specimens of sputum were examined, and a positive result obtained in 29.

The following table shows the death-rate and the number of cases in which rooms and bedding have been disinfected after Phthisis for each year since the practice was commenced :—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Death rate from Phthisis	·76	·77	1·05	·78	·52	·89	·97	·72	·67	·56	·80	·75	·65	·64
Rooms of patients disinfected and bedding stoved . .	20	20	30	24	24	37	89	104	93	137	151	244	299	203

Removal to Hospital.—The number of patients removed to hospital was as follows :—

Disease	Monsall	South Manchester Infirmary	Total
Diphtheria	29	..	29
Erysipelas	7	18	25
Scarlet Fever	148	27	175
Enteric Fever	4	..	4
Puerperal Fever	1	..	1
	189	45	234

The number of patients who have suffered from Scarlet Fever, Diphtheria, and Enteric Fever in the District in each of the years from 1897 to 1914, together with the annual number of removals to hospital, is shown in the following table :—

Year	Number of Cases of Fever in the District	Removed to Hospital	Percentage
1897	S.F. 177. D. 16. E. 10—Total 203	121	59
1898	S.F. 70. D. 22. E. 25— „ 117	54	46
1899	S.F. 68. D. 16. E. 16— „ 100	28	28
1900	S.F. 204. D. 14. E. 8— „ 226	120	53
1901	S.F. 245. D. 31. E. 11— „ 287	162	56
1902	S.F. 109. D. 26. E. 6— „ 141	73	51
1903	S.F. 85. D. 31. E. 14— „ 130	58	44
1904	S.F. 80. D. 28. E. 5— „ 113	43	38
1905	S.F. 136. D. 50. E. 6— „ 192	92	47
1906	S.F. 113. D. 64. E. 12— „ 189	133	70
1907	S.F. 128. D. 24. E. 21— „ 173	96	55
1908	S.F. 94. D. 77. E. 8— „ 179	96	54
1909	S.F. 248 D. 68. E. 4— „ 320	193	60
1910	S.F. 186. D. 38. E. 8— „ 232	119	51
1911	S F. 284. D. 42. E. 3— „ 329	208	60
1912	S.F. 168. D 40. E. 16— „ 224	171	76
1913	S.F. 140 D. 35. E. 9— „ 184	86	47
1914	S.F. 379 D. 83. E. 5— „ 467	208	44

Other Matters.

Number of Water-closets and Privies in the District.—The work of substitution of water-closets for the insanitary privy accommodation is nearing completion.

The number of privies demolished during the last eleven years is as follows :—

1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Total
124	137	187	247	126	167	125	99	147	137	98	1,594

The total number of privies remaining is 192.

The following figures show the approximate number of houses in the district with water-closet or other accommodation on December 31st, 1914:—

Number of houses with water-closets only..	14,059
„ „ „ „ and privies	73
„ „ „ „ and slop water-closets ..	29
„ „ „ privies only	114

Thus there are 14,161 houses with water-closets, 73 of which have, in addition, some other form of accommodation.

There are also a number of premises provided solely with pail-closets, as follows:—

Schools	Farms	Golf Clubs and Cricket Grounds	Works	Houses	Total
2	9	6	17	27	61

The total number of cesspools in the District is 42.

Building in the District during 1914.—The total number of houses certified as fit for habitation during the year ending December 31st, 1914, was 342, distributed as follows:—Withington (including Whalley Range), 248; Didsbury, 18; Chorlton-cum-Hardy, 64; Burnage, 12. In all these the drains have been tested by the Inspector of New Buildings.

THE INSPECTOR OF NUISANCES REPORTS THE PARTICULARS OF WORK CARRIED OUT DURING THE YEAR ENDING DECEMBER 31ST, 1914.

Complaints.—The number of complaints or requests received and attended to during 1914 was 247, compared with 265 in 1913, arising from the several townships, as follows:—

Withington (including Whalley Range)	122
Didsbury and West Didsbury	60
Chorlton-cum-Hardy	59
Burnage..	5
Outside the Withington District	1
Total	247

The number of complaints is the lowest recorded since 1907, and is 16 per cent. below the average for the previous five years. Nuisances from the open grid covers on sewer manholes were most prevalent during September, when they averaged 24 per cent. of the total complaints for that month.

As in former years a number of the manholes have been sealed by the Highways Department, and in this way a local abatement of the nuisances has been effected.

Notices served during the year for alteration of insanitary conditions—143.

	Notices	Premises Concerned
Under Section 36 P.H. Act, 1875	26	40
,, ,, 41 ,, ,, ,, ...	19	50
,, ,, 91–94 ,, ,, ,, ...	6	6
Town Clerk Notices	92	230
Total	143	326

Notices of intention to enter premises under Section 41, P.H. Act, 1875—50

	Under Notice	Without Notice	Total
Insanitary Premises Altered	236	105	341
Accumulations of Manure, etc., removed ..	—	2	2

Premises inspected as to their sanitary condition—504.

Premises inspected after the notification of infectious fevers, including Phthisis and other tubercular diseases—445.

Re-visits to premises *re* cases of Phthisis, Measles, Whooping Cough, etc.—234.

Premises visited *re* passengers from infected ports or ships (Smallpox, etc.)—2.

Disinfection.—The total number of articles stoved during 1914 was 7,798, and consisted of the following :—Beds, 715; mattresses, 193; pillows, 1426; blankets, 1197; carpets, 679; clothes, 2,172; counterpanes, 527; sundries, 889.

Library and other books fumigated with Formaldehyde Gas—80.

Premises disinfected after fevers, including Phthisis, etc. :—Houses, 452; rooms, 1,052.

Re-inspections of premises during disinfection—704.

Drainage and Sanitary Alterations.

Drainage systems of premises smoke tested—5.

The smoke tests were applied by request, and the cost charged to the applicants.

During the year 957 inspections were made of works in progress; 583 tests of drains, water-closets, and soil pipes were made with the water test in connection with sanitary alterations.

60 premises were re-drained throughout and tested with the water test. (49 under notice and 11 without notice).

Details of Work done	Under notice	Without notice	Total
Defective water-closets replaced by new ones ..	40	17	57
Additional water-closets provided	—	4	4
Water-closets substituted for privies	41	7	48
New soil pipes of heavy cast iron	22	10	32
New heavy cast-iron ventilating shafts provided to soil pipes and to drains	30	14	44
Waste pipes or rain-water pipes: trapped, renewed, or repaired	157	53	210
Manholes, with approved disconnecting traps ..	—	1	1
Manholes, without disconnecting traps	—	1	1
Disconnecting traps, without manholes..	6	3	9
Privies dismantled and sites made good	81	17	98
Ashpits dismantled and sites made good	89	53	142
Galvanised-iron dust-bins provided	*181	62	243
Cellar floors: flagged, concreted, or repaired ..	30	13	43
Yards or scullery floors: flagged, concreted, or repaired	118	12	130
House floors: renewed, repaired, or ventilated ..	3	—	3
House roofs' and eaves' gutters: repaired or renewed	4	—	4
Scullery and yard walls: rebuilt or repaired ..	75	—	75
Walls, floors, and roofs of w.c. chambers rebuilt or repaired	70	17	87
Windows for light and ventilation to w.c. chambers	54	12	66
New areas built for cellar drains	4	3	7
W.C. or yard drains: cleansed, repaired, or relaid..	16	35	51
Stopped drains or gullies: opened and cleansed ..	2	2	4
Cesspools dismantled..	1	—	1
New cesspool built with impervious floor and walls.	—	1	1

* Nine supplied in default and cost recovered from owners.

Water Supply.—The Corporation water supply has been constant throughout the year.

Dairies, Cowsheds, and Milkshops.—During the year, 347 visits or inspections have been made of cowsheds and milkshops. The cowsheds have been regularly limewashed, and are in good repair. All the milk farms in the district are supplied with Corporation water.

In 4 instances, milkshops have been cleansed after request.

A new cowshed has been constructed at Withington with space for 20 cows; on the other hand, a cowshed for 28 cows at Whalley Range has been altered into a garage.

Two cowkeepers and 12 purveyors of milk have been registered during 1914. Three cowkeepers and 9 purveyors of milk discontinued the sale of milk, and their names have been removed from the register.

Registered milksellers in the District—166. Registered cowkeepers in the district—34. Cowsheds—86. Milkshops—91.

Approximate number of dairy cows in the District—465; and the average number for the last 10 years has been 558.

Slaughter-houses.—The four slaughter-houses in use in the District have had 52 visits or inspections during the year. The Cleansing Department remove the offal twice each week, and the places are conducted in a satisfactory manner.

Stable Premises.—99 visits have been made to stable yards, etc., where accumulations of manure take place. In four instances sanitary notices and copies of the Bye-laws had to be served, calling for proper receptacles for manure, as verbal requests had not the desired effect.

Reports made to the Medical Officer—940.
Reports made to the Surveyor—14.
Letters written for abatement of nuisances, etc.—132.
Circulars sent for abatement of nuisances, etc.—45.
Miscellaneous inspections, visits to premises, etc.—1,445.

Factory and Workshop Act, 1901.

Inspections, re-inspections, or visits to factories and workshops.	947
Bakehouses cleansed or limewashed after request	38
Workshops cleansed or limewashed after request	14
Outworkers' rooms cleansed or limewashed after request.	1

Shops Act, 1912.

Total number of shops registered in the Withington District ..	812
Total number of visits *re* Shops Act	104

During the year there were 54 new businesses opened in the District, and 10 changes of tenancy recorded in the register.

Wm. Moss,
Inspector of Nuisances.

Report on the Administration of the Factory and Workshop Act, 1901, in so far as this Administration is in the hands of the Withington Committee, and is concerned with matters in the Department of the District Medical Officer of Health.

1.—*Workshops.*

The number of workshops now on the register is 343, distributed throughout the District as follows :—

	Withington and Whalley Range	Didsbury	Chorlton-cum-Hardy	Burnage	Total
Workshops	79	93	73	2	247
Bakehouses	13	17	20	2	52
Laundries	1	3	3	—	7
Factories..	16	11	9	1	37

The cubic capacity of each workshop has been measured, and cards have been placed in each room showing the maximum number of workpeople allowed.

Attention has been given to the cleanliness and ventilation of the workshops.

In 15 cases the walls and ceilings of the workshops were found to be in a dirty condition, and instructions given by the Inspector to have the premises cleansed had the desired effect.

In 4 workshops the sanitary accommodation, which was found to be unsatisfactory, was remedied after request.

Two " Notices of Occupation " were received from H. M. Inspector during 1914.

In 2 instances workshops were found to be overcrowded, and the nuisance in each case was abated after verbal request.

In 10 instances the closets were found to be improperly kept; and instructions given by the Inspector for them to be cleansed at regular intervals have led to an improvement. In another instance a large accumulation of trade refuse was removed to the destructor after request.

2.—*Bakehouses.*

There are now on the register 52 bakehouses, which, on the whole, are kept in a clean and satisfactory condition. In 36 instances during the year it has been found necessary to call the attention of the occupiers to the state of the walls, etc., and to request them to have them cleansed. In 1 instance it was necessary to request the occupiers to cleanse the windows. In 5 instances the sink waste pipes have been trapped, and in 2 instances ventilation provided.

All the bakehouses comply with the Act in not having any sanitary convenience or ashpit communicating directly with them; in not having any cistern for supplying water to them connected in any way with a water-closet; in having no drain openings inside; and in having no sleeping place connected with them.

The bakehouses are distributed over the District as follows :—

Chorlton-cum-Hardy	20
Withington	13
Didsbury	17
Burnage	2
	52

There are no cellar-bakehouses in the District.

3.—*Homework.*

Information with regard to persons in the District taking in homework from places of business outside the District has been received in 29 instances during the year. These premises have been inspected and recorded in the Outworkers' Register. The number of visits paid during the year to premises in which homework has been carried on was 33. No infectious fevers have been notified during the year as occurring in connection with the premises occupied by homeworkers.

In one instance the walls, ceilings, etc., of an outworker's room were cleansed, after instructions from the Inspector.

4.—*Workplaces.*

Under this heading the following are classified :—

New buildings in course of erection, 15; street works, 2; fish and game shops, 9; cab yards and stables, 9; slaughter-houses, 4—total, 39.

In the case of new buildings, it was found that in 9 instances no sanitary accommodation existed for the workmen. A verbal request was sufficient to cause satisfactory accommodation to be provided.

Total number of visits to workplaces during the year, 106.

5.—*Factories.*

There are 37 places in the Withington District in which mechanical power is used.

These are as follows:—

Bootmakers, 5; ironmonger, 1; bottling stores, 1; laundries, 9; printers, 3; joiners, 3; cycle makers and motor engineers, 5; brickworkers, 2; blacksmiths, 2; dentist, 1; rubber works, 1; organ builder, 1; chain works, 1; tripe boiler, 1; colour works, 1. Total number of visits to factories during the year, 86.

Workshops.

Number of visits	Number in which Sanitary defects were found and reported to the Medical Officer of Health	Number of reports referred to Factory Inspector (unregistered workshops)	Number of cases in which Magisterial proceedings have been taken	Number registered during the year	Total number on register	Number of visits to houses where outworkers are employed	Factories and Workshops not provided with proper means of escape in case of fire
642	0	5	0	17	291	33	0

Bakehouses.

Number of visits	Number in which Sanitary defects were found	Number of reports referred to Factory Inspector	Number of cases in which Magisterial proceedings have been taken	Number registered during the year	Total number on register
166	0	0	0	2	52

1.—INSPECTION.

Premises	Number of		
	Inspections	Written Notices	Prosecutions
Factories...	86	1	0
Workshops	556	0	0
Bakehouses	166	0	0
Workplaces	106	0	0
Homeworkers' Premises	33	0	0
Total	947	1	0

2.—DEFECTS FOUND.

Particulars	Number of Defects			No. of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts :—				
Want of cleanliness	53	52	0	0
Want of ventilation	1	1	0	0
Overcrowding	2	2	0	0
Sanitary Accommodation (Section 22 adopted)				
Insufficient	0	0	0	0
Defective	4	4	0	0
Not separate for Sexes...	0	0	0	0
	60	59	0	0

3—OTHER MATTERS.

Class	Number	
Matters notified to H.M. Inspectors of Factories :—		
Failure to affix abstract of the Factory and Workshop Act (S. 133)	5	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts but not under the Factory Act (S. 5)—		
Notified by H.M. Inspector	0	
Reports (of action taken) sent to H.M. Inspectors.	0	
Other	0	
Underground Bakehouses (S. 101) :—		
In use during 1903...	8	
Certificate granted in 1909...	0	
Certificate granted in 1910...	0	
In use at the end of 1910	0	
Homework :—	Number of	
List of Outworkers (S. 107) :—	Lists	Outworkers
Lists received	8	33
Addresses of outworkers forwarded to other authorities		0
Addresses of outworkers received from other authorities		29
Homework in unwholesome or infected premises :—	Wearing Apparel	Other
Notices prohibiting homework in unwholesome premises (S. 108)	0	0
Cases of infectious disease notified in homeworker's premises	0	0
Orders prohibiting homework in infected premises (S. 110)	0	0
Workshops on the Register (S. 131) at the end of 1913 :—		
Dressmaking	32	
Bootmakers	50	
Joiners	20	
Plumbers	18	
Blacksmiths and Wheelwrights	9	
Decorators	7	
Millinery	11	
Ironmongers	5	
Cabinetmakers	11	
Tailors	16	
Bakers	52	
Laundries	16	
Hairdressers	16	
Monumental Masons	3	
Saddlers	4	
Printers	4	
Watchmakers	2	
Picture Framing	—	
Knitting	2	
Cycles and Motor Garage	19	
Bottling Stores	2	
Brickworks	2	
Workplaces	22	
Miscellaneous...	12	
Slaughterhouses	4	
Total number of Workshops on Register	336	

TOTAL NUMBER OF SHOPS REGISTERED IN THE WITHINGTON DISTRICT.

TRADE	Ladybarn and Burnage	Chorlton-cum-Hardy	Didsbury and West Didsbury	Withington	Whalley Range and Moss Side	TOTAL
Boot and Shoe Dealers	6	15	18	10	10	59
Coal Yards	3	..	8	2	..	13
Corn and Provender Dealers	..	1	..	1	..	2
Electrical Fittings	..	1	3	..	..	4
Fent Dealers	..	..	3	..	..	3
Hairdressers	1	5	6	3	2	17
Machinery and Typewriters	..	1	..	1	..	2
Incandescent Mantles	2	1	5	3	..	11
Picture Dealers	..	1	..	..	..	1
Paint and Colour Dealers	..	1	..	1	..	2
Saddlers	..	2	1	1	..	4
Wallpaper Salesmen	..	..	4	..	..	4
Exempted Trades.						
Bazaars	..	..	..	1	..	1
Butchers	6	18	14	7	7	52
Chemists and Druggists	1	5	5	5	..	16
Cycle and Motor Dealers	..	4	3	3	..	10
Confectioners	10	28	30	15	13	96
Dairymen	2	5	9	2	5	23
Drapers	4	16	13	4	10	47
Dress and Mantle Dealers	..	7	8	3	..	18
Florists	..	1	5	1	1	8
Fruiterers	1	7	10	2	2	22
Fishmongers	..	5	4	2	..	11
Fried Fish and Chips	2	4	6	4	5	21
Furniture Dealers	1	6	4	2	1	14
Glass and China Dealers	..	2	3	..	..	5
Greengrocers	7	5	6	4	7	29
Grocers and Provision Dealers	12	24	22	17	25	100
Hatters	..	1	..	..	..	1
Hardware Dealers	3	7	8	2	5	25
Hosiers and Outfitters	..	4	3	..	..	7
Intoxicating Liquors	12	15	23	13	2	65
Jewellers	..	3	3	2	..	8
Millinery	..	4	3	3	1	11
Music and Musical Instruments	..	1	..	1	..	2
Pork Butchers	..	1	..	1	..	2
Photographers	..	1	..	1	..	2
Stationers and Booksellers	3	12	9	4	6	34
Tailors	..	1	7	1	..	9
Tobacconists	3	10	8	2	4	27
Tripe	..	1	..	..	..	1
Refreshments, &c.	1	..	1	1	..	3
Empty Shops	6	8	4	2	..	20
	86	234	259	127	106	812

TABLES

TABLE A.—MANCHESTER, 1914.

Causes of Death at Different Life Periods in the 52 weeks of the year.

PERSONS.—(MALES AND FEMALES.)

CAUSES OF DEATH	Ages at Death													
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
All Causes	12386	2405	1520	326	208	261	277	689	1116	1328	1616	1655	850	135
A.—General Diseases	4957	1327	871	175	106	152	156	366	459	496	471	302	68	8
B.—Local Diseases	6080	698	578	126	91	102	92	265	577	775	1066	1146	504	60
C.—Other Specified Dis:	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D.—Ill-defined Diseases	817	283	24	...	...	1	...	1	1	1	24	163	257	62
E.—Violent Deaths	532	97	47	25	11	6	29	57	79	56	55	44	21	5
A.—General Diseases.														
Smallpox.. Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox.. Not Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox.. No Statement	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cowpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chickenpox	6	...	6	...	...	...	...	...	...	...	...	...	...	...
Measles	293	66	209	17	...	...	...	...	1	...	...	...	...	..
Epidemic Rose Rash	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	160	4	88	37	13	8	3	5	2	...	...	...	...	...
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	..	...	...	...	...	...	...	...	...	...	...
Influenza	113	8	5	3	1	...	4	6	12	23	20	26	5	...
Whooping Cough	283	117	157	8	...	...	...	...	1	...	...	...	...	...
Mumps	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Memb: Croup	111	12	69	25	3	1	...	...	...	1	...	...	...	...
Poliomyelitis	2	1	...	...	...	...	...	...	...	...	1	...	...	...
Cerebro-spinal Fever	4	1	1	...	1	...	...	1	...	...	...	...	...	...
Simple Cont: Fever	2	1	...	...	...	...	...	...	...	1	...	...	...	...
Enteric Fever	38	...	1	...	2	4	9	6	10	3	3	...	...	...
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Diarrhœa	178	131	43	...	...	...	...	...	...	...	...	2	2	...
Diarrhœa	346	282	54	2	...	...	...	...	...	...	1	5	2	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malarial Fever	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Actinomycosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pelagra	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hydrophobia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	65	53	3	1	...	...	...	4	1	2	1	...	...	...
Gonorrhœa, Strict: Urethra	9	...	...	...	...	...	...	1	1	4	1	2	...	...
Puerperal.. Septicæmia	8	...	...	...	...	...	1	7	...	...	...	...	...	...
Puerperal.. Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal.. Phlegmasia Dol:	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal.. *Fever*	14	...	...	...	...	1	3	7	3	...	...	...	...	...
Infective Endocarditis	15	...	...	1	2	...	4	3	3	2	...	...	...	...
Epidemic Pneumonia Pneumonic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	24	3	...	...	...	...	1	3	2	5	6	2	1	1
Septicæmia (not puerp:)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pyæmia (not puerp:)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phlegmon	2	...	...	...	...	...	...	...	...	...	...	...	2	...
Phagedæna	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases	5	...	1	...	1	...	...	...	2	...	1	...	...	...
Tubercular Phthisis	1134	13	28	14	28	88	99	246	269	186	120	38	5	...
Phthisis	123	...	1	5	5	11	14	25	22	28	10	2	...	...

TABLE A, 1914—*continued.*

CAUSES OF DEATH	All Ages	Under 5 Years: 0 to 1	Under 5 Years: 1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
A.—General Diseases— *continued*														
ubercular Meningitis	163	28	86	24	14	8	1	1	1	...	...	...	...	...
ubercular Peritonitis	71	14	30	8	6	5	2	4	2	...	...	...	...	...
abes Mesenterica	25	13	8	2	1	...	...	...	...	1	...	...	...	...
upus	1	...	...	...	...	...	...	...	...	...	...	1	...	...
ubercle of other organs	51	3	10	5	5	6	4	4	3	8	2	1	...	...
eneral Tuberculosis	55	6	15	9	6	5	2	2	3	1	3	3	...	...
crofula	...	...	...	...	...	...	...	...	...	...	...	...	...	...
arasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
tarvation	...	...	...	...	...	...	...	...	...	...	...	...	...	...
curvy	1	...	1	...	...	...	...	...	...	...	...	...	...	...
lcoholism, Delirium Tremens	52	...	...	...	...	...	...	3	19	18	11	1	...	...
pium, Morphia Habit	...	...	...	...	...	...	...	...	...	...	...	...	...	...
tomaine Poisoning	5	...	1	1	...	...	...	...	1	1	1	...	...	...
ndustrial Poisoning: Lead	5	...	...	...	...	...	...	...	2	3	...	...	...	...
ndustrial Poisoning: Phosphorus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ndustrial Poisoning: Arsenic, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
heum: Fever, Acute Rheum:	65	...	6	6	9	8	3	11	9	4	6	2	1	...
heumatism of Heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...
hronic Rheumatism	28	...	...	1	1	2	1	1	3	3	8	6	2	...
heum: Arthritis, Rheum: Gout	18	...	...	...	...	...	...	1	1	6	4	3	3	...
out	4	...	...	...	...	...	...	...	1	...	1	1	1	...
arcinoma	589	...	...	...	...	1	...	9	60	150	195	138	30	6
arcoma	52	...	2	...	2	2	3	5	4	9	14	6	4	1
Cancer," Malignant Disease	97	...	...	...	...	...	...	2	8	22	29	32	4	...
ickets	26	11	15	...	...	...	...	...	...	...	...	...	...	...
urpura	5	2	1	...	1	...	...	...	...	...	1	...	...	...
æmophilia, Hæm: Diathesis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
næmia, Leucocythæmia	53	...	3	2	2	...	2	2	4	9	12	16	1	...
iabetes Mellitus	68	...	...	2	3	2	...	7	8	6	20	15	5	...
ther Constitutional Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
remature Birth	409	409	...	...	...	...	...	...	...	...	...	...	...	...
ongenital Defects	72	61	9	2	...	...	...	...	...	...	...	...	...	...
njury at Birth	38	38	...	...	...	...	...	...	...	...	...	...	...	...
telectasis	32	32	...	...	...	...	...	...	...	...	...	...	...	...
Vant of Breast Milk	6	6	...	...	...	...	...	...	...	...	...	...	...	...
eething	29	11	18	...	...	...	...	...	...	...	...	...	...	...
.—Local Diseases.														
-NERVOUS SYSTEM.														
nflammation of Brain	110	30	31	17	7	7	2	6	2	4	3	1	...	...
oftening of Brain	16	...	...	...	...	...	...	...	...	1	4	6	5	...
eneral Paraly: of Insane	77	...	...	...	...	...	..	11	29	26	7	4	...	...
nsanity (not puerperal)	126	...	3	2	...	...	1	4	8	10	17	41	32	8
horea	7	...	1	...	1	3	1	...	1	...	...	...	...	...
pilepsy	61	1	1	...	2	4	3	12	14	10	7	7	..	...
onvulsions	79	66	8	3	...	...	...	1	1	...	...	...	...	..
aryngismus Stridulus	10	4	4	2	...	...	...	...	...	...	...	...	...	...
ocomotor Ataxy	20	...	...	...	...	...	...	...	7	5	6	2	...	...
is: of Spinal Cord	46	...	1	2	1	...	2	3	6	14	8	7	2	...
euritis	12	...	...	...	...	...	...	...	4	4	4	...	...	...
rain Tumour	26	1	1	4	4	1	1	5	3	4	1	...	1	...
ervous System (other Dis :)	14	1	2	...	...	...	...	...	3	3	1	4	...	...
. DISEASES OF SPECIAL SENSE ORGANS.														
titis, Mastoid Disease	32	1	8	4	5	3	1	5	3	2	...	...	...	...
pistaxis, Nose Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...
phthalmia, Eye Disease	3	3	...	...	...	...	...	...	...	...	...	...	..	...

TABLE A, 1914—*continued.*

CAUSES OF DEATH	Ages at Death												
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
3. DISEASES OF HEART.														
Valvular Dis : Endocarditis	481	1	2	6	24	20	17	30	65	103	104	79	27	3
Pericarditis	8	...	1	...	1	...	...	...	3	2	...	...	...	1
Hypertrophy of Heart...........	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Angina Pectoris	29	...	...	...	...	...	...	1	3	4	9	10	2	...
Dilatation of Heart	91	...	...	...	...	1	...	2	11	6	25	39	7	...
Fatty Degen : of Heart	37	...	...	...	...	...	...	1	3	8	9	11	5	...
Syncope, Heart Disease.........	401	1	1	1	1	4	6	9	51	60	103	112	48	4
4. DIS : OF BLOOD VESSELS.														
Cerebral Hæmorrhage............	372	4	...	...	...	...	1	1	20	66	93	118	64	5
Apoplexy, Hemiplegia.............	118	...	...	...	...	1	1	2	4	16	36	43	13	2
Aneurism	22	...	...	...	...	...	...	1	2	9	5	2	3	...
Senile Gangrene	20	...	...	...	...	...	...	...	...	...	4	6	10	...
Embolism, Thrombosis	65	1	...	...	...	1	2	2	6	7	16	21	7	2
Phlebitis..............................	4	...	...	...	...	...	...	...	...	...	3	1	...	...
Varicose Veins	2	...	...	...	...	...	...	...	...	1	...	1	...	...
Blood Vessels (Other Diseases)	99	...	1	...	...	...	...	1	1	15	27	37	15	2
5. DIS : OF RESPIRATORY SYS :														
Laryngitis	7	2	4	1	...	...	...	...	...	...	...	...	...	...
Memb: Laryng: (Not Diphth:)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup	5	...	4	1	...	...	...	...	...	...	...	...	...	...
Larynx (Other Dis :)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	1,136	160	63	7	3	2	3	14	47	94	232	333	159	19
Pneumonia { Lobar...............	381	16	40	18	6	14	15	30	75	64	53	38	12	...
Pneumonia { Broncho............	778	276	319	25	10	4	4	5	23	19	29	37	22	5
"*Pneumonia*"......................	130	10	14	2	3	4	...	11	16	19	22	23	5	1
Emphysema, Asthma	24	...	...	...	...	...	...	3	5	4	6	3	2	1
Pleurisy	35	3	3	1	...	3	...	5	4	3	6	4	3	...
Fibroid Disease of Lung........	4	...	...	...	...	...	...	2	1	...	...	...	1	...
Respiratory Dis: (Other)	44	6	3	...	...	...	...	1	6	4	8	6	10	...
6. DIS: OF DIGESTIVE SYS:														
Tonsillitis, Quinsy	11	1	3	1	1	1	...	1	2	...	1	...	...	...
Mouth, Pharynx	25	16	3	...	...	1	...	...	4	...	1	...	...	...
Gastric Ulcer........................	68	...	...	...	...	2	7	13	17	16	10	3	...	...
Gastric Catarrh.....................	14	7	2	...	...	...	...	...	...	2	1	1	1	...
Stomach (Other Dis:)............	76	39	9	5	...	...	...	2	...	7	3	6	5	...
Enteritis..............................	16	...	...	...	...	...	...	4	3	...	2	5	2	...
Gastro-Enteritis....................	23	...	12	1	...	...	...	2	...	4	1	3	...	...
Appendicitis, Perityph :	53	...	1	8	12	10	2	8	4	5	1	2	...	...
Hernia	34	2	...	...	...	...	...	1	...	3	12	10	5	1
Intestinal Obstruct:..............	32	3	2	...	1	1	...	...	8	1	10	4	2	...
Other Diseases of Intestines ...	19	6	5	...	...	...	1	1	2	...	1	3	...	...
Peritonitis	23	...	2	4	...	1	1	1	6	4	3	1	...	...
Cirrhosis of Liver.................	86	...	...	...	1	...	1	3	14	29	24	8	5	1
Liver and Gall Bladder (O. D.).	34	10	3	...	...	...	...	1	5	5	4	5	1	...
Digestive System (Other Dis:)...	24	9	3	...	...	...	...	2	2	3	2	3	...	...
7. DIS : OF LYMPHATIC AND DUCTLESS GLANDS.														
Spleen, Disease of.................	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Lymphat: Syst: (Other Dis:)...	24	5	2	1	...	3	2	2	1	6	2	...	...	...
Thyroid Body (Other Dis:) ...	5	...	...	...	1	...	1	1	...	2	...	...	...	...
Supra Renal Caps: (Dis: of)...	8	...	...	...	...	...	1	1	1	2	2	1	...	...
8. DISEASES OF URINARY SYSTEM.														
Nephritis Ac:, Uræmia	90	...	8	5	3	3	3	8	8	21	17	13	1	...
Ch : Bright's Dis : Albumin : ...	279	3	3	2	3	3	3	14	42	56	90	49	10	1
Calculus	18	...	...	...	...	...	...	1	3	1	6	5	2	...
Bladder and Prostate Dis : ...	44	...	...	...	...	...	...	...	...	3	12	15	10	4
Urinary Syst : (Other Dis :) ...	18	1	...	...	...	...	1	...	4	3	1	5	3	...

TABLE A, 1914—*concluded.*

CAUSES OF DEATH	Ages at Death													
	All Ages	Under 5 Years 0 to 1	Under 5 Years 1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
9. Diseases of Generative System.														
Ovarian Tumour	5	...	...	...	...	...	...	1	2	1	...	1	...	...
Other Dis : of Ovary	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Uterine Tumour	9	...	...	...	...	...	...	...	2	4	...	2	1	...
Other Dis: of Uterus and Vagina	4	...	...	...	...	...	...	2	1	...	1	...	...	...
Disord : of Menstruation	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gener: and Mam: Orgs: (other)	5	...	...	...	...	...	1	3	1	...	...	...	...	...
10. Diseases of Pregnancy and Childbirth.														
Abortion, Miscarriage	2	...	...	...	...	...	...	2	...	...	...	...	...	...
Puerperal Mania	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	13	...	...	...	...	...	4	5	3	1	...	...	...	...
Placenta Præv: Flooding	15	...	...	...	...	1	...	8	6	...	...	...	...	...
Other Ac: of Preg: & Childbirth	16	...	...	...	...	...	2	8	5	1	...	...	...	...
11. Diseases of Locomotor System.														
Caries, Necrosis	8	...	...	1	...	2	...	...	1	2	...	1	1	...
Arthritis, Periostitis	3	1	...	...	...	...	...	...	...	...	2	...	...	...
Locomotor Sys : (Other)	9	...	2	2	1	...	1	...	...	1	2	...	...	...
12. Diseases of the Skin.														
Ulcer, Bedsore	9	...	1	...	...	1	...	...	...	1	3	3	...	...
Eczema	3	3	...	...	...	...	...	...	...	...	...	...	...	...
Pemphigus	4	3	...	...	...	...	...	...	...	1	...	...	...	...
Skin Diseases (other)	16	2	2	...	...	1	1	1	3	2	3	1	...	...
C.—Other Specified Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D.—Ill-defined and not Specified Diseases.														
Atrophy, Debility	305	281	23	...	...	...	...	...	...	...	1	...	...	...
Old Age	502	...	...	...	...	...	...	...	...	...	22	161	257	62
Dropsy, Ascites, Anasarca	2	...	...	...	...	...	...	...	...	1	...	1	...	...
Tumour	2	...	...	...	...	...	...	1	...	...	...	1	...	...
Abscess	4	2	1	...	...	...	...	...	...	...	1	...	...	...
Hæmorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden (cause unascertained)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Ill-defined	2	...	...	...	...	1	...	...	1	...	...	...	...	...
E.—Violent Deaths.														
1. Accident.														
In Mines and Quarries	1	...	...	...	...	...	...	...	1	...	...	...	...	...
By Vehicles { On Railways	14	...	...	...	1	...	3	4	3	2	1	...	...	...
By Vehicles { In Streets	44	...	3	3	2	1	2	2	9	7	9	2	3	1
Ships, Boats, Docks (not Drowning)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Building Operations	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Machinery	9	...	...	...	1	...	3	2	3	...	...	...	...	...
Weapons and Implements	2	...	...	...	...	...	...	...	1	1	...	...	...	...
Burns and Scalds	76	5	36	10	3	...	...	5	3	1	4	6	2	1
Poison, Poisonous Vapours	10	...	...	...	...	...	...	1	4	...	3	1	1	...
Drowning	41	...	4	8	1	2	1	6	5	6	5	3	...	...
Suffocation	96	89	1	...	...	1	...	...	3	2	...	...	...	...
Falls	106	...	1	2	2	...	4	7	19	19	17	19	13	3
Weather Agencies	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Otherwise or not Stated	37	1	1	2	1	1	3	6	11	1	5	4	1	...
Injury by Firearms (Battle)	18	...	...	...	...	...	9	8	1	...	...	...	...	...
2. Homicide.	9	2	1	...	...	1	...	1	2	1	...	1	...	...
3. Suicide.	67	...	...	...	...	...	4	14	13	16	11	8	1	...
4. Execution.	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE B.—MANCHESTER, 1914.

Causes of Deaths at Different Life Periods—MALES.

Classes	CAUSES OF DEATH	All Ages Total	Ages at Death—in years: Under 5 Years: 0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
	All Causes	6524	1378	753	167	104	117	152	383	627	754	907	801	342	39
A	Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	146	32	108	6	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever	80	2	46	18	6	4	1	2	1	...	...	...	...	...
	Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough	123	58	60	4	...	...	...	...	1	...	...	...	...	...
	Diphtheria, Memb: Croup	51	6	31	12	1	...	...	...	...	1	...	...	...	...
	Ill-defined Fever	1	...	...	...	...	...	...	...	...	1	...	...	...	...
	Enteric Fever	20	...	...	...	1	2	8	3	4	2	...	...	...	...
	Influenza	61	4	2	1	...	...	...	5	5	17	14	12	1	...
	Epidemic Diarrhœa	84	61	22	...	...	...	...	...	...	...	...	...	1	...
	Diarrhœa, Dysen., Simple Chol.	199	168	26	1	...	...	...	...	...	...	...	3	1	...
	Venereal Affections	45	30	1	...	...	...	...	4	1	6	1	2	...	...
	Erysipelas	9	2	...	...	...	...	1	2	1	1	2	...	...	...
	Pyæmia, Septicæmia	2	...	...	...	1	...	...	...	1	...	...	...	...	...
	Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Zymotics	5	...	4	...	...	...	...	...	1	...	...	...	...	...
	Tuberc. Periton: Tabes Mes:	55	21	21	4	3	1	...	3	1	1	...	...	...	...
	Tubercular Meningitis	78	10	44	14	5	4	...	...	1	...	...	...	...	...
	Phthisis	780	5	14	9	14	42	62	157	193	151	102	27	4	...
	Tuberculous Dis. (other)	64	6	15	9	9	6	2	4	4	5	3	1	...	...
	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alcoholism	33	...	...	...	...	...	...	2	13	11	7	...	...	...
	Rheumatic Fever	30	...	2	5	5	2	1	7	3	2	3	...	...	...
	Cancer	347	...	...	...	2	1	2	7	23	81	131	88	9	3
	Premature Birth	226	226	...	...	...	...	...	...	...	...	...	...	...	...
	Atelectasis	23	23	...	...	...	...	...	...	...	...	...	...	...	...
	Congenital Defects	55	50	4	1	...	...	...	...	...	...	...	...	...	...
B and C	Epilepsy	36	1	...	...	1	3	1	8	7	8	2	5	...	...
	Convulsions	54	47	5	2	...	...	...	...	...	...	...	...	...	...
	Nervous Syst: (other)	244	23	18	16	6	4	3	16	38	37	25	39	18	1
	Cereb: Haem: Apoplexy, Hemip:	220	2	...	...	...	...	1	1	10	40	56	74	32	4
	Heart and Blood Vessel Dis:	631	3	2	3	13	12	12	21	67	110	171	156	56	5
	Pleurisy	23	2	2	1	...	3	...	4	1	3	6	1	...	...
	Croup	3	...	2	1	...	...	...	...	...	...	...	...	...	...
	Bronchitis	538	88	37	3	...	...	2	8	25	42	122	140	64	7
	Pneumonia	737	175	199	22	11	8	14	35	79	75	53	47	18	1
	Respiratory Dis: (other)	47	4	3	1	...	...	...	5	7	6	8	6	6	1
	Digestive Syst: (other)	273	56	24	8	10	9	7	23	32	38	40	18	6	2
	Urinary Syst: (other)	277	4	4	5	2	2	4	10	32	49	91	57	14	3
	Generative Organs	...	..	...	...	...	...	...	...	...	...	...	...	...	...
	Other specified Diseases	205	33	27	7	6	10	7	13	21	26	29	21	5	...
D	Marasmus and Atrophy	203	187	15	...	...	...	...	...	...	...	1	...	...	...
	Old Age	195	...	...	...	...	...	...	...	...	...	8	78	97	12
	Other Ill-defined Causes	6	1	...	...	...	1	...	...	...	1	1	2	...	...
E	Violence	258	46	15	14	8	3	22	34	44	26	21	16	9	...
	Homicide	6	2	...	...	...	...	...	...	2	1	...	1	...	...
	Suicide	51	...	...	...	...	...	2	9	9	13	10	7	1	...
	Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE C.—MANCHESTER, 1914.

Causes of Deaths at Different Life Periods—FEMALES.

Classes	CAUSES OF DEATH	All Ages Total	Ages at Death—in years												
			Under 5 Years												
			0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
	All Causes	5862	1027	767	159	104	144	125	306	489	574	709	854	508	96
A	Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	147	34	101	11	...	...	...	...	1	...	...	...	...	...
	Scarlet Fever	80	2	42	19	7	4	2	3	1	...	...	...	...	...
	Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough	160	59	97	4	...	...	...	...	...	...	...	...	...	...
	Diphtheria, Memb: Croup	60	6	38	13	2	1	...	...	...	...	...	...	...	..
	Ill-defined Fever	1	1	...	...	...	...	...	..	...	...	...	...	...	...
	Enteric Fever	18	...	1	...	1	2	1	3	6	1	3	...	...	...
	Influenza	52	4	3	2	1	...	4	1	7	6	6	14	4	...
	Epidemic Diarrhœa	94	70	21	...	...	...	...	...	...	...	...	2	1	...
	Diarrhœa, Dysentery, Simple Cholera	147	114	28	1	...	...	...	...	...	...	1	2	1	...
	Venereal Affections	29	23	2	1	...	...	...	1	1	...	1	...	...	...
	Erysipelas	15	1	...	...	...	...	...	1	1	4	4	2	1	1
	Pyæmia, Septicæmia	3	...	1	...	...	...	...	...	1	...	1	...	...	...
	Puerperal Fever	22	...	...	...	...	1	4	14	3	...	...	...	...	...
	Other Zymotics	2	...	2	...	...	...	...	...	...	...	...	...	...	...
	Tubercular Periton: Tabes Mes.	41	6	17	6	4	4	2	1	1	...	...	...	...	...
	Tubercular Meningitis	85	18	42	10	9	4	1	1	...	...	...	...	...	...
	Phthisis	477	8	15	10	19	57	51	114	98	63	28	13	1	...
	Tuberculous Diseases (other)	43	3	10	5	2	5	4	2	2	4	2	4	...	...
	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alcoholism	19	...	...	...	...	...	...	1	6	7	4	1	...	...
	Rheumatic Fever	35	...	4	1	4	6	2	4	6	2	3	2	1	...
	Cancer	391	...	2	...	...	2	1	9	49	100	107	88	29	4
	Premature Birth	183	183	...	...	...	...	...	...	...	...	...	...	...	...
	Atelectasis	9	9	...	...	...	...	...	...	...	...	...	...	...	...
	Congenital defects	55	49	5	1	...	...	...	...	...	...	...	...	...	...
B and C	Epilepsy	25	...	1	...	1	1	2	4	7	2	5	2	...	...
	Convulsions	25	19	3	1	...	...	...	1	1	...	...	...	...	...
	Nervous System (other)	220	13	25	11	7	7	4	13	25	34	26	26	22	7
	Cerebral Hœmorrhage, Apoplexy, and Hemiplegia	270	2	...	...	...	1	1	2	14	42	73	87	45	3
	Heart and Blood Vessel Diseases	629	...	3	4	13	14	13	26	78	106	134	163	68	7
	Pleurisy	12	1	1	...	...	...	...	1	3	...	...	3	3	...
	Croup	2	...	2	...	...	...	...	...	...	...	...	...	...	...
	Bronchitis	598	72	26	4	3	2	1	6	22	52	110	193	95	12
	Pneumonia	552	127	174	23	8	14	5	11	35	27	51	51	21	5
	Respiratory Diseases (other)	32	4	4	...	...	...	...	1	5	2	6	3	7	...
	Digestive System (other)	265	37	21	11	5	7	5	16	35	41	36	36	15	...
	Urinary System (other)	172	...	7	2	4	4	3	13	25	35	35	30	12	2
	Generative Organs and Childbirth	70	...	...	...	...	1	7	30	20	7	1	3	1	...
	Other specified Diseases	192	18	28	8	11	4	7	12	11	23	34	26	10	...
D	Marasmus and Atrophy	102	94	8	...	...	...	. .	...	...	...	...	...	...	...
	Old Age	307	...	...	...	...	...	...	...	...	...	14	83	160	50
	Other Ill-defined Causes	4	1	1	...	...	...	...	1	1	...	...	...	...	...
E	Violence	198	49	31	11	3	2	3	8	20	13	23	19	11	5
	Homicide	3	...	1	...	...	1	...	1	...	...	...	...	...	...
	Suicide	16	...	...	...	...	...	2	5	4	3	1	1	...	...
	Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE D.

CITY OF MANCHESTER, 1914.—CAUSES OF DEATH IN INFANCY AND CHILDHOOD.

CAUSES OF DEATH	UNDER ONE YEAR			Total under One Year	ONE AND UNDER FIVE YEARS				Total under Five Years
	Under 3 months	3–6 months	6–12 months		1–	2–	3–	4–	
All Causes	1,275	433	697	2,405	823	354	197	146	3,925
Measles	1	3	62	66	127	54	19	9	275
Scarlatina	1	...	3	4	21	23	25	19	92
Whooping Cough	15	29	73	117	80	45	20	12	274
Diphtheria (Memb: Croup)	1	1	10	12	29	14	15	11	81
Fever (various forms)	...	1	...	1	...	...	1	...	2
Diarrhœal Diseases	163	116	134	413	89	4	2	2	510
Syphilis	36	15	2	53	2	1	...	...	56
Tabes Mesenterica and Tuberc. Peritonitis	4	11	12	27	17	9	8	4	65
Tubercular Meningitis	3	6	19	28	28	28	18	12	114
Tuberculosis (other)	1	10	11	22	19	15	14	6	76
Premature Birth	401	7	1	409	...	...	...	...	409
Teething	...	3	8	11	18	...	...	...	29
Convulsions	45	10	11	66	3	4	1	...	74
Brain Diseases (other)	10	8	19	37	20	9	6	9	81
Lung Diseases	105	119	249	473	274	99	47	30	923
Atrophy, Marasmus	210	40	31	281	21	2	...	...	304
Found Dead in Bed (overlaid)	52	18	3	73	...	...	..	...	73
Suffocation	11	4	1	16	...	1	...	...	17
Violence (other forms)	3	2	3	8	16	16	2	12	54
Ill-defined Causes	1	...	1	2	...	...	1	...	3
Unclassified	212	30	44	286	59	30	18	20	413

TABLE E, 1881 TO 1914.—MANCHESTER.—ESTIMATED POPULATIONS. ANNUAL RATES OF MARRIAGES, BIRTHS, AND DEATHS, (*a*) from all causes, and (*b*) from specified causes; also the percentages to total deaths of Inquest Cases, and of Deaths in Public Institutions; also the quinquennial averages from 1871–1910, with the average for same period.

	Years	Estimated Populations (Mean)	Persons Married	Annual Rates per 1,000 Persons living													Percentage to Total Deaths		Years	
				Births	Deaths (All Causes)	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Enteric Fever	Simple Continued Fever	Diarrhœa and Dysentery	English Cholera	Violence	Inquest Cases	Deaths in Public Institutions		
Quinquennial Averages	1871–1875	477,344	24·6	38·9	28·3	0·26	0·64	1·08	0·08	0·78	0·14	0·43	0·21	1·92	0·03	0·94	7·2	13·4	1871–1875	Quinquennial Averages
	1876–1880	509,802	18·6	38·7	26·2	0·24	0·53	1·07	0·13	0·84	0·08	0·29	0·11	1·22	0·04	0·89	7·5	14·3	1876–1880	
	1881–1885	542,746	17·9	35·1	23·6	0·04	0·71	0·48	0·10	0·68	0·05	0·20	0·03	0·96	0·03	0·72	7·0	15·9	1881–1885	
	1886–1890	575,630	16·6	33·4	24·6	0·02	0·83	0·50	0·32	0·54	0·02	0·30	0·01	1·06	0·02	0·78	6·9	17·7	1886–1890	
	1891–1895	517,801	16·9	33·2	23·6	0·03	0·62	0·26	0·27	0·64	0·00	0·24	0·01	1·14	0·05	0·77	7·1	19·2	1891–1895	
	1896–1900	539,599	18·2	32·5	22·7	...	0·89	0·20	0·13	0·53	0·00	0·18	0·01	1·65	0·04	0·73	7·1	20·2	1896–1900	
	1901–1905	554,355	17·4	30·9	20·1	0·01	0·55	0·19	0·22	0·41	0·00	0·13	0·00	1·15		0·72	7·1	24·4	1901–1905	
	1906–1910	660,049	17·0	28·1	17·7	...	0·54	0·16	0·17	0·37	0.00	0·10	0·00	0·76		0·68	7·4	27·3	1906–1910	
Avge. 40 yrs.	1871–1910	562,739	17·6	32·6	22·4	0·03	0·66	0·35	0·20	0·55	0·02	0·20	0·02	1·17		0·74	7·1	21·0	1871–1910	Avge. 40 yrs.
	1881	530,051	17·8	35·9	22·8	0·03	0·29	0·34	0·09	0·71	0·03	0·17	0·06	0·73	0·02	0·84	8·1	15·9	1881	
	1882	536,324	18·8	35·7	24·0	0·05	0·89	0·34	0·11	0·87	0·10	0·25	0·04	1·00	0·03	0·67	7·2	14·5	1882	
	1883	542,671	17·8	34·9	24·4	0·01	0·71	0·81	0·11	0·62	0·05	0·20	0·03	0·95	0·03	0·73	7·0	15·5	1883	
	1884*	549,093	18·0	34·4	23·4	0·01	0·57	0·74	0·08	0·49	0·03	0·19	0·03	1·46	0·05	0·65	6·2	17·3	1884*	
	1885	555,591	17·0	34·8	23·6	0·08	1·08	0·17	0·10	0·71	0·04	0·17	0·01	0·64	0·02	0·69	6·4	16·4	1885	
	1886	562,166	16·4	34·7	24·1	0·00	0·27	0·41	0·15	0·57	0·03	0·29	0·01	1·34	0·04	0·71	7·2	17·0	1886	
	1887	568,819	16·6	33·9	25·4	0·01	1·54	0·63	0·23	0·50	0·02	0·31	0·01	1·19	0·02	0·77	6·9	16·1	1887	
	1888	575,550	16·0	33·3	23·3	0·07	0·27	0·42	0·36	0·79	0·02	0·33	0·02	0·71	0·01	0·74	6·7	18·3	1888	
	1889	582,362	17·0	33·1	24·2	0·00	1·22	0·45	0·51	0·45	0·01	0·31	0·01	1·00	0·03	0·89	6·5	18·2	1889	
	1890*	589,253	17·0	31·8	26·2	...	0·83	0·60	0·36	0·37	0·01	0·27	0·02	1·04	0·02	0·79	7·0	19·1	1890*	
	1891†	‡ 508,673	17·2	33·8	26·0	...	0·43	0·22	0·25	1·02	0·01	0·37	0·01	0·81	0·04	0·79	6·8	18·4	1891†	

* The facts for these years are for 53 instead of 52 weeks; corrections have, therefore, been made in calculating the rates.

† The populations and rates for the years subsequent to 1890, except the marriage rates, relate to the City of Manchester as enlarged by the Act of that year. The facts and rates for previous years are those for the three Unions of Manchester, Chorlton, and Prestwich, which have been taken to approximately represent "Manchester."

‡ These figures include a proportion of the inmates of certain Extra-municipal Institutions which receive patients from the City of Manchester, and are therefore in excess of the estimates of the Registrar-General.

TABLE E—*Continued.*

Years	Estimated Populations — (Mean)	Persons Married	Annual Rates per 1,000 Persons living: Births	Deaths (All Causes)	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Enteric Fever	Simple Continued Fever	Diarrhœa and Dysentery	Violence	Percentages to Total Deaths: Inquest Cases	Deaths in Public Institutions	Infantile Mortality	Years
1892†	‡ 513,196	17·2	33·4	23·2	0·00	0·72	0·27	0·25	0·72	0·00	0·24	0·01	0·81	0·77	7·4	18·2	178	1892†
1893†	‡ 517,760	16·0	33·4	24·3	0·09	0·57	0·27	0·35	0·46	0·00	0·25	0·01	1·85	0·76	6·9	18·7	201	1893†
1894†	‡ 522,365	16·8	31·8	19·8	0·04	0·42	0·22	0·29	0·55	...	0·17	0·01	0·72	0·75	7·5	21·3	159	1894†
1895†	‡ 527,010	17·4	33·4	24·5	0·00	0·96	0·33	0·21	0·47	...	0·18	0·01	1·72	0·80	6·9	19·2	202	1895†
1896†*	‡ 531,697	18·3	32·8	22·0	...	1·05	0·37	0·15	0·66	0·00	0·22	0·01	1·06	0·71	7·4	19·7	176	1896†*
1897†	‡ 536,426	17·8	32·9	22·4	...	1·17	0·23	0·08	0·56	0·00	0·18	0·00	1·80	0·68	6·6	20·0	195	1897†
1898†	‡ 541,296	18·3	32·3	21·2	...	0·50	0·12	0·09	0·31	...	0·22	0·01	2·02	0·69	7·0	19·5	196	1898†
1899†	‡ 546,010	18·4	32·2	23·9	...	1·28	0·08	0·16	0·42	0·00	0·13	0·01	2·05	0·78	7·0	19·7	205	1899†
1900†	‡ 542,566	18·0	32·4	23·8	...	0·47	0·19	0·19	0·68	...	0·14	0·01	1·52	0·78	7·4	21·9	189	1900†
1901†	‡ 546,408	17·6	28·7	21·6	...	0·53	0·23	0·24	0·41	0·02	0·14	0·00	1·86	0·78	7·9	23·2	198	1901†
1902†*	‡ 550,355	18·1	33·0	20·0	...	0·44	0·27	0·22	0·44	...	0·12	...	0·54	0·73	7·6	23·8	151	1902†*
1903†	‡ 554,331	17·8	31·7	19·5	0·04	0·62	0·17	0·25	0·38	...	0·17	0·00	0·91	0·72	7·0	25·3	169	1903†
1904†	‡ 558,335	16·5	31·1	20·9	0·02	0·76	0·15	0·18	0·50	...	0·12	0·00	1·36	0·73	5·9	24·6	187	1904†
1905§	‡ 631,933	17·0	29·0	17·8	...	0·37	0·12	0·20	0·31	...	0·09	0·01	1·15	0·59	6·7	24·1	159	1905§
1905‖	562,346	...	30·1	18·7	...	0·40	0·13	0·22	0·34	...	0·09	0·01	1·27	0·65	6·9	24·9	...	1905‖
1906§	637,520	18·0	28·9	19·0	...	0·75	0·17	0·19	0·30	...	0·13	0·00	1·54	0·62	7·3	25·4	169	1906§
1906‖	566,409	...	30·1	19·9	...	0·83	0·19	0·20	0·33	...	0·14	0·00	1·66	0·66	7·3	26·2	...	1906‖
1907§	643,158	18·3	28·4	17·9	...	0·36	0·16	0·16	0·49	...	0·06	0·00	0·45	0·67	8·0	26·5	147	1907§
1907‖	570,506	...	29·4	18·7	...	0·39	0·18	0·18	0·52	...	0·06	0·00	0·50	0·71	8·1	27·4	...	1907‖
1908§*	648,846	16·7	28·9	18·1	...	0·56	0·14	0·19	0·33	...	0·11	...	0·90	0·71	7·4	26·0	152	1908§*
1908‖*	574,637	...	30·0	18·8	...	0·60	0·16	0·20	0·35	...	0·12	...	0·99	0·76	7·6	27·0	...	1908‖*
1909§	654,584	15·4	27·5	17·7	...	0·60	0·25	0·17	0·20	0·00	0·13	0·00	0·41	0·73	7·3	29·6	136	1909§
1909‖	578,803	...	28·5	18·4	...	0·67	0·27	0·19	0·21	0·00	0·15	0·00	0·45	0·77	7·5	30·6	...	1909‖
1910§§	716,137	16·7	26·8	15·9	...	0·41	0·10	0·14	0·55	0·00	0·09	...	0·49	0·66	7·1	29·0	132	1910§§
1910¶	578,266	...	27·8	16·9	...	0·46	0·12	0·16	0·61	0·00	0·09	...	0·55	0·72	7·3	30·8	...	1910¶
1911	716,734	16·3	25·9	17·1	...	0·47	0·06	0·12	0·20	0·00	0·07	...	1·60	0·67	7·2	28·6	156	1911
1912	724,168	17·1	25·1	16·2	0·00	0·68	0·07	0·13	0·41	...	0·06	...	0·38	0·65	8·0	30·5	122	1912
1913*	731,556	17·3	25·6	15·8	...	0·35	0·13	0·14	0·19	...	0·06	0·00	0·84	0·69	8·2	30·8	129	1913*
1914	739,136	16·9	25·3	16·8	...	0·40	0·22	0·15	0·38	...	0·05	0·00	0·71	0·72	8·2	32·3	129	1914

* The facts for these years are for 53 instead of 52 weeks; corrections have, therefore, been made in calculating the rates.

† The populations and rates for the years subsequent to 1890, except the marriage rates, relate to the City of Manchester as enlarged by the Act of that year. The facts and rates for previous years are those for the three Unions of Manchester, Chorlton, and Prestwich, which have been taken to approximately represent "Manchester."

‡ These figures include a proportion of the inmates of certain Extra-municipal Institutions which receive patients from the City of Manchester, and are therefore in excess of the estimates of the Registrar-General.

§ Includes the newly amalgamated districts of Moss Side and Withington. ‖ Exclusive of Moss Side and Withington.

§§ Includes Moss Side, Withington, Gorton, and Levenshulme. ¶ Exclusive of Moss Side, Withington, Gorton, and Levenshulme.

Note.—The population for 1900 is based on the Census figures of 1891 and 1901.

TABLE F, 1881 TO 1914.—MANCHESTER.

ANNUAL RATES OF MORTALITY FROM CERTAIN CAUSES OF DEATH.

YEAR	ANNUAL RATES PER 1,000 PERSONS LIVING										RATES PER 1,000 BIRTHS	
	Cancer	Tuber: Peritonitis Tabes Mes:	Phthisis	Other Tuber: Diseases	Diseases of Nervous System	Diseases of Circulatory System	Diseases of Respiratory System	Diseases of Digestive System	Diseases of Urinary System	Diseases of Generative System	Puerperal Fever	Childbirth
1881–1885	0·50	0·35	2·42	0·57	3·28	1·37	5·41	1·23	0·48	0·08	3·03	1·99
1886–1890	0·64	0·36	2·24	0·59	3·09	1·73	5·76	1·23	0·61	0·08	3·22	2·13
1891–1895	0·62	0·22	2·09	0·75	1·74	2·53	5·56	1·07	0·52	0·07	2·75	3·42
1896–1900	0·73	0·19	2·04	0·63	1·32	2·54	5·03	1·04	0·49	0·09	1·55	1·51
1901–1905	0·80	0·16	1·94	0·55	1·17	2·56	4·29	0·95	0·49	0·08	1·21	1·76
1906–1910	0·88	0·14	1·65	0·45	0·95	2·56	3·75	0·84	0·54	0·07	1·28	1·49
1881–1910	0·73	0·24	2·06	0·60	1·92	2·21	4·96	1·06	0·52	0·08	2·17	2·06
†1891	0·63	0·25	2·20	0·78	2·30	2·69	6·77	1·03	0·55	0·07	3·08	4·01
1892	0·61	0·21	2·05	0·75	1·70	2·59	5·44	1·14	0·53	0·05	3·79	4·54
1893	0·59	0·26	2·05	0·76	1·70	2·48	5·53	1·20	0·53	0·07	3·70	3·94
1894	0·66	0·18	1·97	0·67	1·48	2·31	4·35	0·96	0·49	0·04	1·93	2·77
1895	0·63	0·22	2·16	0·77	1·51	2·60	5·73	1·04	0·49	0·11	1·25	1·82
*1896	0·66	0·13	2·00	0·60	1·33	2·53	5·19	1·04	0·46	0·11	0·96	1·47
1897	0·74	0·22	2·12	0·67	1·35	2·45	4·51	1·03	0·51	0·10	2·10	1·36
1898	0·73	0·19	1·95	0·67	1·22	2·15	4·27	1·00	0·54	0·09	1·72	1·54
1899	0·75	0·24	2·05	0·61	1·34	2·73	5·47	0·99	0·47	0·10	1·37	1·54
1900	0·76	0·17	2·09	0·60	1·37	2·82	5·78	1·15	0·48	0·05	1·59	1·65
1901	0·78	0·20	2·09	0·83	1·22	2·55	4·48	1·00	0·49	0·03	2·17	1·72
*1902	0·79	0·16	2·08	0·55	1·13	2·61	4·71	0·93	0·58	0·11	0·94	1·65
1903	0·76	0·18	1·85	0·58	1·25	2·46	3·95	0·99	0·46	0·08	0·80	1·59
1904	0·81	0·15	1·98	0·54	1·17	2·71	4·38	1·02	0·50	0·09	1·04	2·13
‖1905	0·86	0·12	1·56	0·48	1·06	2·47	3·70	0·81	0·41	0·09	1·09	1·80
§1905	0·86	0·13	1·68	0·50	1·10	2·49	3·94	0·83	0·42	0·10	1·12	1·71
‖1906	0·88	0·14	1·71	0·49	1·06	2·68	3·52	0·91	0·47	0·07	1·63	1·63
§1906	0·89	0·15	1·81	0·52	1·09	2·69	3·75	0·95	0·46	0·08	1·76	1·70
‖1907	0·77	0·15	1·70	0·41	1·01	2·53	4·30	0·80	0·56	0·07	1·09	1·26
§1907	0·78	0·16	1·80	0·44	1·04	2·56	4·58	0·83	0·55	0·07	1·07	1·19
‖1908*	0·89	0·12	1·65	0·47	0·96	2·52	3·91	0·87	0·59	0·06	1·16	1·31
§1908*	0·87	0·12	1·74	0·47	0·97	2·55	4·19	0·89	0·58	0·06	1·14	1·37
‖1909	0·93	0·13	1·70	0·44	0·87	2·75	3·90	0·85	0·52	0·09	0·94	1·94
§1909	0·91	0·13	1·81	0·45	0·90	2·75	4·14	0·86	0·51	0·10	0·97	2·06
§§1910	0·92	0·15	1·49	0·43	0·84	2·33	3·13	0·77	0·54	0·07	1·56	1·30
‡‡1910	0·95	0·15	1·64	0·46	0·89	2·39	3·44	0·76	0·58	0·06	1·50	1·25
1911	1·05	0·13	1·56	0·39	0·88	2·17	3·43	0·61	0·58	0·08	1·40	1·61
1912	1·00	0·10	1·53	0·44	0·76	2·29	3·78	0·60	0·52	0·09	1·10	2·15
1913	0·98	0·12	1·42	0·39	0·77	2·28	3·26	0·75	0·50	0·10	1·05	2·26
1914	1·00	0·13	1·70	0·36	0·82	2·37	3·44	0·73	0·61	0·09	1·18	2·46

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* The facts for these years are for 53 instead of 52 weeks; corrections have therefore been made in calculating the rates.

† The rates of mortality for the years subsequent to 1890 refer to the City of Manchester as enlarged by the Act of that ear. The rates for 1890 and for previous years are those for the three Unions of Manchester, Chorlton, and Prestwich, which ave been taken to approximately represent "Manchester."

‖ Includes the districts of Moss Side and Withington.

§ Exclusive of Moss Side and Withington. §§‡‡ See references to Table E.

TABLE G, 1914.—Population, Area, Density. Total Births and Deaths, with Birth and Death Rates.

[Institution Populations, Births and Deaths, distributed.]

	Statistical Divisions	Estimated Population *	Area in Acres	Persons to an Acre	Births Total	Births Rate per 1,000	Deaths Total	Deaths Rate per 1,000	Natural Rate of Increase	Mean Death Rate 1904-1913	Percentage Improvement
	City of Manchester...	**739,136**	**20,799**	**36**	**18,697**	**25·30**	**12,386**	**16·76**	**8·54**	**17·64**	**4·**
I.	Manchester Township	110,603	1,646	67	3,558	32·17	2,878	26·02	6·15	24·76	−5·
II.	North Manchester ...	209,114	7,321	29	5,263	25·17	3,019	14·43	10·74	14·76	2·
III.	South Manchester ...	419,419	11,832	35	9,876	23·55	6,489	15·47	8·08	16·75	7·
I.	Ancoats	39,831	400	100	1,369	34·37	1,079	27·09	7·28	24·57	-10·
	Central	20,633	748	28	517	25·06	534	25·88	−0·82	26·07	0·
	St. George's...........	50,139	498	101	1,672	33·35	1,265	25·23	8·12	24·33	−3·
II.	Cheetham	44,218	919	48	998	22·57	527	11·92	10·65	11·73	−1·
	Crumpsall	10,608	733	14	184	17·35	139	13·10	4·25	13·08	−0·
	Blackley	14,914	1,840	8	284	19·04	176	11·80	7·24	15·81	25·
	Harpurhey	17,531	193	91	481	27·44	273	15·57	11·87	13·36	-16·
	Moston	26,664	1,297	21	640	24·00	306	11·48	12·52	11·60	1·
	Newton Heath	42,988	1,350	32	1,061	24·68	701	16·31	8·37	17·53	6·
	Bradford	25,617	288	89	823	32·13	449	17·53	14·60	18·92	7·3
	Beswick	12,174	96	127	405	33·27	216	17·74	15·53	18·16	2·3
	Clayton	14,400	605	24	387	26·88	232	16·11	10·77	13·44	-19·8
III.	Ardwick	39,621	509	78	1,135	28·65	686	17·31	11·34	17·33	0·1
	Openshaw	32,064	581	55	887	27·66	541	16·87	10·79	17·97	6·1
	Gorton (West).........	26,884	318	84	822	30·58	476	17·71	12·87	16·60	−6·6
	Rusholme and Kirk.	43,833	1,412	31	809	18·46	436	9·95	8·51	13·89	28·3
	Chorlton-upon-Med...	54,192	646	84	1,241	22·90	1,112	20·52	2·38	19·05	−7·7
	Hulme.................	62,698	477	131	1,922	30·65	1,335	21·29	9·36	22·07	3·5
	Moss Side	35,823	421	85	552	15·41	447	12·48	2·93	13·05	4·3
	Withington	55,572	5,728	10	974	17·53	633	11·39	6·14	10·33	-10·2
	Gorton	46,095	1,134	41	1,135	24·62	604	13·10	11·52	15·64	16·2
	Levenshulme	22,637	606	37	399	17·63	219	9·67	7·96	10·55	8·3

TABLE H, 1914.

Births Registered in the City of Manchester, in its Main Divisions and in Districts; Distinguishing Legitimate and Illegitimate Births; also the Proportion of Mortality among Infants of both Classes under One Year of Age.

	STATISTICAL DIVISIONS	BIRTHS		Percentage of Illegitimate Births to Total Births	Deaths under 1 Year		Proportion of Deaths under 1 Year Per 1,000 Births			Deaths under 1 Year per 1000 Births in the 10 years, 1904 to 1913
		Total	Illegitimate		Total	Of Illegitimate Children	Total	Legitimate	Illegitimate	
	City of Manchester ...	**18,697**	**793**	**4·2**	**2,405**	**205**	**129**	**123**	**259**	**149**
I.	Manchester Township	3,558	168	4·7	635	49	178	173	292	185
II.	North Manchester ...	5,263	159	3·0	611	28	116	114	176	134
III.	South Manchester ...	9,876	466	4·7	1,159	128	117	110	274	143
I.	Ancoats	1,369	60	4·4	274	22	200	193	367	185
	Central	517	49	9·5	83	11	160	154	224	193
	St. George's.........	1,672	59	3·5	278	16	166	162	271	182
II.	Cheetham............	998	35	3·5	81	5	81	79	143	95
	Crumpsall............	184	8	4·4	28	5	152	131	625	128
	Blackley	284	4	1·4	25	...	88	89	...	110
	Harpurhey	481	13	2·7	55	3	114	111	231	132
	Moston...............	640	29	4·5	57	4	89	87	138	116
	Newton Heath......	1,061	29	2·7	147	4	139	139	138	148
	Bradford	823	20	2·4	100	2	122	122	100	165
	Beswick	405	10	2·5	62	1	153	154	100	168
	Clayton..............	387	11	2·8	56	4	145	138	364	151
III.	Ardwick	1,135	51	4·5	157	22	138	125	431	158
	Openshaw	887	36	4·1	119	10	134	128	278	158
	Gorton (West)	822	31	3·8	106	9	129	123	290	160
	Rusholme and Kirk.	809	22	2·7	58	2	72	71	91	96
	Chorlton-on-Med. ...	1,241	116	9·3	163	31	131	117	267	160
	Hulme	1,922	104	5·4	275	27	143	136	260	164
	Moss Side	552	29	5·3	37	2	67	67	69	95
	Withington............	974	41	4·2	79	14	81	70	341	87
	Gorton	1,135	23	2·0	127	7	112	108	305	149
	Levenshulme	399	13	3·3	38	4	95	88	308	87

TABLE J, 1914.

INFANTILE MORTALITY IN THE CITY, AND ITS THREE MAIN DIVISIONS.

DEATH-RATES UNDER ONE YEAR PER 1,000 BIRTHS.

CAUSES OF DEATH	City of Manchester	Manchester Township	North Manchester	South Manchester
All Causes	128·63	178·47	116·09	117·35
Measles	3·53	3·37	4·75	2·94
Whooping Cough	6·26	8·43	5·13	6·08
Other Com: Infectious Diseases†	0·91	1·12	1·33	0·61
Diarrhœal Diseases	22·09	41·60	15·01	18·83
Tubercular Diseases‡	4·12	7·03	1·90	4·25
Convulsions	3·53	2·81	5·13	2·94
Other Nervous Diseases§	1·98	1·97	1·71	2·13
Lung Diseases	25·30	40·19	26·60	19·24
Premature Birth.....................	21·88	26·70	18·24	22·07
Atrophy, &c. ‖	15·03	18·27	15·39	13·67
Suffocation	0·86	1·69	0·19	0·91
Found dead in bed (overlaid) ...	3·90	7·59	2·47	3·35

† These are Smallpox, Scarlatina, Diphtheria, Membranous Croup, and various forms of "Fever" including the chief forms of Typhus and Typhoid.

‡ These are Phthisis, Tubercular Meningitis (Hydrocephalus), Tabes Mesenterica, and General Tuberculosis (Scrofula).

§ These are Meningitis, and other diseases of the Brain and Spinal Cord.

‖ These are such ill-defined causes as Atrophy, Marasmus, Debility, Inanition, &c.

TABLE K, 1914.—City of Manchester. Annual Rates of Mortality per 1,000 Persons living at all ages, in the City of Manchester and in its Statistical Divisions, from certain Diseases and Groups of Diseases.

Causes of Death	City of Manchester	Manchester Township	North Manchester	South Manchester	City of Manchester Average of 10 years 1904-1913
All Causes	16·76	26·02	14·43	15·47	17·64
Smallpox	...	...	...	...	...
Measles	0·40	0·69	0·44	0·30	0·56
Scarlet Fever	0·22	0·17	0·22	0·23	0·15
Typhus Fever	...	...	...	...	...
Influenza	0·15	0·11	0·15	0·17	0·15
Whooping Cough	0·38	0·61	0·33	0·35	0·37
Diphtheria and Memb: Croup.	0·15	0·20	0·22	0·10	0·17
Ill-defined Fever..................	0·00	...	...	0·00	...
Enteric Fever	0·05	0·09	0·03	0·05	0·10
Diarrhœal Diseases	0·71	1·74	0·50	0·54	0·96
Puerperal Fever	0·03	...	0·04	0·03	0·03
Erysipelas	0·03	0·03	0·02	0·04	0·04
Pyæmia, Septicæmia	0·01	0·01	...	0·01	0·04
Phthisis (Tuberc: Pulmon:) ...	1·70	3·71	1·21	1·42	1·70
Tubercular Meningitis...........	0·22	0·29	0·23	0·20	0·25
Tuberc: Periton: Tabes Mes:..	0·13	0·24	0·06	0·14	0·13
Tuberculous Dis: (other)	0·14	0·29	0·10	0·13	0·21
Alcoholism	0·07	0·14	0·03	0·07	0·08
Cancer	1·00	1·19	0·77	1·06	0·91
Rheumatic Fever	0·09	0·03	0·11	0·10	0·06
Premature Birth	0·55	0·86	0·46	0·52	0·61
Nervous Diseases	0·82	1·00	0·64	0·86	0·96
Heart and Blood Vessels Diseases	2·37	3·08	2·16	2·28	2·49
Bronchitis	1·54	2·49	1·43	1·34	1·78
Pneumonia	1·74	3·56	1·42	1·43	1·91
Respiratory Diseases (other) ...	0·16	0·25	0·13	0·15	0·20
Digestive Organs (Diseases of)	0·73	0·80	0·65	0·75	0·81
Urinary Organs (Diseases of)	0·61	0·90	0·54	0·56	0·52
Old Age	0·68	0·48	0·67	0·73	0·49

TABLE L, 1914.

MANCHESTER.—Certification of the Causes of Death in the Main Divisions and in Districts.

	Statistical Divisions.	Total Deaths	Certified by		Not Certified	Proportion per cent. of Deaths		
						Certified by		
			Registered Medical Practitioners	Coroner		Regist'd Medical Practitioners	Coroner	Not Certified
	City of Manchester	12,386	11,351	1,010	25	91·6	8·2	0·2
	I. Manchester Township...	2,878	2,573	302	3	89·4	10·5	0·1
	II. North Manchester	3,019	2,804	204	11	92·9	6·7	0·4
	III. South Manchester	6,489	5,974	504	11	92·0	7·8	0·2
I.	Ancoats	1,079	975	103	1	90·4	9·5	0·1
	Central	534	450	84	...	84·3	15·7	...
	St. George's	1,265	1,148	115	2	90·7	9·1	0·2
II.	Cheetham	527	488	37	2	92·6	7·0	0·4
	Crumpsall	139	133	5	1	95·7	3·6	0·7
	Blackley	176	163	11	2	92·6	6·3	1·1
	Harpurhey	273	248	22	3	90·8	8·1	1·1
	Moston	306	284	21	1	92·8	6·9	0·3
	Newton Heath	701	654	47	...	93·3	6·7	...
	Bradford	449	415	32	2	92·5	7·1	0·4
	Beswick	216	203	13	...	94·0	6·0	...
	Clayton	232	216	16	...	93·1	6·9	...
III.	Ardwick	686	633	53	...	92·3	7·7	...
	Openshaw	541	516	25	...	95·4	4·6	...
	Gorton (West)	476	432	44	...	90·8	9·2	...
	Rusholme and Kirk. ...	436	397	36	3	91·0	8·3	0·7
	Chorlton-upon-Medlock	1,112	1,000	111	1	89·9	10·0	0·1
	Hulme	1,335	1,225	107	3	91·8	8·0	0·2
	Moss Side	447	412	32	3	92·1	7·2	0·7
	Withington..............	633	600	33	...	94·8	5·2	...
	Gorton	604	560	43	1	92·7	7·1	0·2
	Levenshulme	219	199	20	...	90·9	9·1	...

TABLE M, 1914.—City of Manchester.—Annual Rates of Mortality at six groups of ages, * per 1,000 living at those age groups, from certain prevalent diseases, and groups of diseases; also the Average Rates of Mortality for the years 1901-1910.

Causes of Death		Under 5 Years		5 to 14 Years		15 to 24 Years		25 to 44 Years		45 to 64 Years		65 Years and upwards	
		Average 1901-1910	1914	Average 1901-1910	1914	Average 1901-1910	1914	Average 1901-1910	1914	Average 1901-1910	1914	Average 1901-1910	1914
All Causes		62·77	49·20	3·65	3·76	3·74	4·09	8·93	7·46	30·18	25·47	103·94	93·27
Smallpox		0·01	...	0·00	...	0·00	...	0·01	...	0·01	...	0·01	...
Measles		4·43	3·45	0·13	0·12	0·01	...	...	0·00	0·00	...	...	...
Scarlatina		0·98	1·15	0·27	0·35	0·02	0·08	0·02	0·03	0·00	...	...	...
Diphtheria, Memb. Croup		1·16	1·02	0·28	0·20	0·01	0·01	0·01	...	0·00	0·01	...	...
Whooping Cough		3·25	3·43	0·08	0·06	...	...	...	0·00	...	...	...	...
Fever	Typhus	...	...	0·00	...	0·00	...	0·00	...	0·00	...	...	...
	Enteric	0·04	0·01	0·06	0·01	0·15	0·10	0·17	0·07	0·10	0·05	0·03	...
	Continued	0·00	0·01	0·00	...	0·00	...	0·00	...	0·00	0·01	0·01	...
Diarrhœal Diseases		7·93	6·39	0·02	0·01	0·01	...	0·01	...	0·09	0·01	0·73	0·39
Tubercular Diseases		4·00	3·20	0·91	0·93	1·43	1·86	2·87	2·41	3·88	3·11	2·08	1·77
Malignant Diseases		0·02	0·03	0·01	0·01	0·04	0·05	0·46	0·36	3·36	3·62	7·50	7·81
Diseases of...	Nervous System	3·84	1·94	0·26	0·32	0·18	0·19	0·55	0·50	1·56	1·20	4·61	4·24
	Heart and Blood Vessels	0·32	0·15	0·26	0·23	0·43	0·41	1·17	0·91	7·52	6·33	32·46	24·73
	Respiratory System	13·56	11·57	0·47	0·54	0·51	0·37	1·47	1·03	6·93	4·87	27·08	24·16
	Digestive System	3·38	1·73	0·19	0·24	0·22	0·21	0·42	0·44	1·48	1·34	2·93	2·72
	Urinary System	0·22	0·06	0·07	0·09	0·11	0·10	0·37	0·33	1·58	1·82	3·88	4·17
Other Diseases		19·64	14·93	0·65	0·64	0·64	0·71	1·49	1·39	4·32	3·10	24·13	23·28

TABLE N, 1914—Annual Rates of Mortality in Statistical Divisions at six groups of ages, *per 1,000 living at those age groups, from certain prevalent diseases, and groups of diseases.

Causes of Death		Under 5 Years			5 to 14 Years			15 to 24 Years		
		Manchester Township	North Manchester	South Manchester	Manchester Township	North Manchester	South Manchester	Manchester Township	North Manchester	South Manchester
All Causes		83·44	42·84	42·64	4·95	3·80	3·38	5·38	3·78	3·92
Smallpox		...	...	...	...	...	...	...	...	...
Measles		5·75	3·70	2·64	0·13	0·14	0·10	...	...	...
Scarlatina		1·26	1·32	1·03	0·09	0·31	0·45	...	0·03	0·14
Diphtheria, Memb. Croup		1·50	1·32	0·71	0·13	0·38	0·12	...	...	0·01
Whooping Cough		5·12	2·81	3·28	0·13	0·02	0·05	...	...	...
Fever	Typhus	...	...	...	...	...	...	...	...	...
	Enteric	...	0·04	...	...	0·02	0·01	0·31	0·05	0·07
	Continued	...	...	0·02	...	...	...	...	...	...
Diarrhœal Diseases		14·96	4·30	5·03	0·04	0·02	...	...	...	...
Tubercular Diseases		5·75	2·08	3·05	1·56	0·75	0·84	3·10	1·59	1·68
Malignant Disease		...	...	0·05	0·04	...	0·01	0·10	0·05	0·03
Diseases of	Nervous System	2·20	1·96	1·86	0·40	0·28	0·31	0·26	0·15	0·19
	Heart and Blood Vess.	0·31	0·04	0·16	0·18	0·28	0·22	0·36	0·49	0·38
	Respiratory System	22·44	10·97	8·72	1·07	0·56	0·38	0·62	0·46	0·26
	Digestive System	1·89	1·79	1·65	0·18	0·28	0·23	0·10	0·18	0·26
	Urinary System	0·31	0·13	0·18	0·13	0·05	0·10	0·10	0·08	0·11
Other Diseases		21·96	12·38	14·25	0·85	0·70	0·54	0·41	0·69	0·79

Causes of Death		25 to 44 Years			45 to 64 Years			65 Years and upwards		
		Manchester Township	North Manchester	South Manchester	Manchester Township	North Manchester	South Manchester	Manchester Township	North Manchester	South Manchester
All Causes		12·58	6·14	6·88	38·59	22·25	23·35	103·47	93·09	90·56
Smallpox		...	...	...	...	...	...	...	...	...
Measles		...	...	0·01	...	...	...	...	...	...
Scarlatina		0·03	0·01	0·04	...	...	...	...	...	...
Diphtheria, Memb. Croup		...	...	...	...	...	0·01	...	...	...
Whooping Cough		...	0·01	...	...	...	...	...	...	...
Fever	Typhus	...	...	...	...	...	...	...	...	...
	Enteric	0·12	0·03	0·07	...	...	0·09	...	...	...
	Continued	...	...	...	...	...	0·01	...	...	...
Diarrhœal Diseases		...	...	...	...	...	0·01	0·43	0·30	0·41
Tubercular Diseases		4·60	1·77	2·19	8·00	2·15	2·21	7·33	0·91	1·59
Malignant Disease		0·42	0·30	0·38	4·60	2·81	3·73	6·68	8·00	8·04
Diseases of	Nervous System	0·78	0·40	0·47	1·64	0·73	1·30	2·80	3·17	5·05
	Heart and Blood Vess.	1·41	0·82	0·83	8·11	6·35	5·84	28·24	26·10	23·24
	Respiratory System	1·95	0·67	0·98	8·11	4·46	4·17	35·14	21·73	22·13
	Digestive System	0·66	0·37	0·42	1·43	1·12	1·42	2·16	2·41	2·99
	Urinary System	0·54	0·34	0·28	2·52	1·88	1·59	5·82	3·77	3·87
Other Diseases		2·07	1·41	1·22	4·17	2·74	2·97	14·87	26·70	24·24

* For death-rates at all ages, see Table K.

TABLE O, 1914.—PARTICULARS AS TO MANCHESTER PATIENTS UNDER TREATMENT IN MONSALL AND CLAYTON HOSPITALS DURING THE YEAR; ALSO OF PATIENTS FROM OUTSIDE DISTRICTS SENT TO MONSALL AND CLAYTON DURING THE SAME PERIOD.

HOSPITAL	DISEASE	In Hospital commencement of year	Admitted	Discharged	Died	Remaining in Hospital close of year
Clayton	SMALLPOX	...	...	...	...	...
Monsall	SCARLET FEVER	318	2,448	2,367	96	303
	DIPHTHERIA	77	431	380	71	57
	ENTERIC FEVER	37	122	108	26	25
	TYPHUS FEVER	...	1	1	...	...
	ERYSIPELAS	6	148	129	14	11
	PUERPERAL FEVER	11	73	63	15	6
	OTHER ACUTE DISEASES	3	107	72	35	3
	TOTAL	452	3,330	3,120	257	405

PATIENTS SENT TO MONSALL OR CLAYTON, FROM DISTRICTS OUTSIDE THE CITY DURING THE YEAR 1914.

DISEASE	Barnes' Convales. Hospital	Swinton Schools	Royal Infirmary	Pendlebury Hospital	Bucklow Joint Hosp. Board	Cheadle	Other Outside Districts
Smallpox	...	...	...	...	...	...	...
Scarlatina	11	24	2	1	104	17	13
Diphtheria	...	...	...	2	17	...	1
Enteric Fever	...	...	...	...	3	...	...
Other Diseases	2	..	4	3	5	1	4

Total, 214.

TABLE P, 1914.—WORK OF SANITARY DEPARTMENT FOR THE YEAR.

		TOWNSHIPS																					TOTALS
		Ancoats	Central	St. George's	Cheetham	Crumpsall	Blackley	Harpurhey	Moston	Newton	Bradford	Beswick	Clayton	Ardwick	Openshaw	Gorton (West)	Rusholme and Kirkmanshulme	Chorlton-upon-Medlock	Hulme	Moss Side	Withington	Levenshulme	Gorton	
Complaints to Sanitary Superintendent		482	138	208	443	69	58	94	106	222	265	47	129	454	201	36	643	461	769	230	...	88	162	5,305
Inspections of	Dwelling-houses	8597	3807	4355	5199	2764	713	1020	2446	4934	2746	1777	2854	3785	3623	2307	5099	5023	7681	3289	...	1812	3321	77,152
	Newly-infected Dwelling-houses	273	145	333	445	86	108	114	251	430	254	84	109	352	300	306	367	443	482	206	...	149	521	5,758
	Cellars	8	...	52	...	...	...	...	...	..	...	...	...	...	...	...	...	11	3	...	...	...	...	74
	Schools	1	...	1	...	...	2	...	1	17	...	...	...	1	1	...	1	...	51	2	...	1	1	80
	Factories and Workshops	20	32	28	...	...	24	3	2	14	...	...	...	11	2	6	11	3	90	2	...	...	11	259
	Lodging-houses	1022	2181	1515	1251	9	1	12	11	51	81	46	4	257	15	24	86	1580	1909	39	...	...	17	10,111
	Offensive Trades	121	65	52	13	5	41	33	22	39	...	14	104	68	64	5	22	52	159	17	...	14	24	934
	Dairies and Milkshops	233	743	547	451	16	41	43	63	58	94	33	30	327	303	162	95	249	285	134	...	71	190	4,168
	Ice Cream Manufactories	560	16	98	1	...	...	2	...	11	20	...	3	31	12	20	...	13	6	2	...	...	1	796
	Bakehouses	167	102	69	383	30	93	14	53	72	21	10	31	87	71	40	146	199	178	165	...	114	72	2.117
	Canal Boats	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.585
	Slaughter-houses	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	8	...	2	...	12
	Tips for Refuse	...	...	...	31	1	...	1	1	4	...	...	1	...	...	...	5	...	...	...	...	...	1	45
	Miscellaneous Inspections	1197	1275	1202	779	302	282	260	260	762	476	221	544	1317	1620	498	555	2402	1656	188	...	492	855	17,143
	Factories and Workshops by Shop Hours, &c., Inspectors	668	3761	1035	2387	33	236	41	36	309	104	22	61	346	141	145	298	1191	620	306	...	67	94	11,901
	Shops by Shop Hours, &c., Inspectors	1878	3384	2044	2384	165	680	185	328	1150	426	72	184	771	1112	423	519	1383	1704	809	..	364	585	20,550
Infected Rooms Disinfected		1600	613	1543	769	254	363	480	1179	1728	964	612	275	1370	1044	1063	1314	2077	2167	774	...	516	1546	22,251
Infected Dwellings Re-inspected		837	467	1727	1519	465	829	1451	950	1746	639	235	103	1410	738	1882	1076	983	1468	519	...	625	1399	21,068
Drains Tested by Water		243	271	72	43	10	28	46	48	84	43	36	14	99	26	104	142	225	200	60	...	34	120	1,948
Smoke Abatement	Observations made	34	57	10	31	62	15	11	7	35	79	1	18	11	40	12	8	39	47	2	14	4	12	549
	Proceedings before Magistrates	12	12	4	11	1	23	4	2	4	3	2	10	6	3	2	2	4	4	1	1	2	5	118
Food Adulteration	Samples Collected for Analysis	122	399	145	123	28	30	29	51	116	58	20	28	117	121	84	171	382	366	172	204	100	152	*3,030
	Proceedings before Magistrates	11	30	1	2	...	...	2	1	2	...	...	...	4	3	1	1	7	2	1	1	...	3	72
Ashpits reported to Cleansing Department for emptying		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	2	4
Receptacles reported to Cleansing Department for emptying		3	1	1	8	6	2	...	...	3	...	...	...	...	...	1	7	2	1	4	...	...	2	41
Notices issued for Abatement of Nuisances.		1173	611	1292	1207	188	242	311	508	807	699	120	221	750	368	558	996	1113	1535	276	...	333	743	14,051
Letters written for Abatement of Nuisances		115	42	119	100	18	8	16	8	39	48	...	12	31	17	9	33	66	126	7	1	4	14	‡833
Reports made to Medical Officer of Health		1	1	...	10	1	12	21	...	2	...	...	...	2	...	...	2	...	2	1	...	...	39	94
Legal proceedings taken		34	64	24	50	...	1	4	1	10	5	5	4	16	11	4	3	63	109	8	...	2	3	†427
Total Nuisances abated		1278	408	1227	1083	188	179	324	521	897	624	117	206	757	418	550	979	1127	1538	320	...	314	739	13·794

* 12 Samples procured Outside the City. † 6 cases Infringement of Canal Boats Acts.

‡ In addition to these there were 2,845 circular letters sent to owners *re* defective water-closets and ashbins, and 2,510 orders on the Cleansing Department for new ashbins were sent to owners or contractors.

The Midwives Supervising Committee present, for the information of the City Council, the following report of the operations carried on in Manchester during 1914 under the Midwives Act, 1902:—

STATEMENT BY THE EXECUTIVE OFFICER, MARGUERITE A. C. DOUGLAS, L.R.C.P. and S.E.

Statistics Relating to Midwives.

The number of midwives who gave notice of their intention to practise in Manchester during 1914 was 161; of these, 33 reside without the City.

The following table (A) gives particulars relating to midwives practising in Manchester, and sets forth their qualifications prior to entry on the Midwives' Roll. It will be seen that more than 80 per cent. are certificated midwives.

It also contains under the separate headings the number of labours attended by midwives, the cases of Puerperal Fever, with other details in relation to these, and the number of withdrawals and suspensions, with the reasons therefor.

TABLE A.—PARTICULARS RELATING TO MIDWIVES PRACTISING IN MANCHESTER IN 1914.

Qualification of Midwife.		Bona-fides.	St. Mary's Hospital.	Maternity Hospital.	London Obstetric Society.	Queen Charlotte Hospital.	Liverpool Lying-in Hospital.	Central Midwives Board.	Total.
No. notifying their intention to practise in Manchester in 1914	Resident in Manchester ...	25	13	9	20	1	2	58	128
	Resident outside Manchester ...	7	3	1	5	...	...	17	33
No. removing from Manchester area........		1	...	...	...	...	...	...	1
No. given up practice..........................		...	...	...	...	...	...	...	...
No. who have died..............................		3	...	1	...	...	...	1	5
No. removed from Roll..........................		2	1	1	...	...	...	...	†4
No. of births attended by midwives under the heading given..........................		1680	1433	1112	1660	31	250	3243	9409
No. of cases of puerperal fever attended by midwives under the heading given		7	11	10	9	...	1	20	58
Deaths amongst cases of puerperal fever attended by midwives		1	3	3	...	...	...	2	9
Per cent. of puerperal fever amongst all cases attended		0·42	0·77	0·90	0·54	...	0·40	0·62	0·62
Per cent. of puerperal fever amongst cases attended by midwives having puerperal fever in their practice		1·75	1·09	1·89	1·18	...	0·71	1·44	1·37
No. of suspensions or withdrawal from practice on account of	Puerperal fever..............	9	9	7	6	...	1	24	56
	Pemphigus	2	5	6	5	...	...	8	26
	High temperature	1	3	...	2	...	...	5	11
	Other infectious diseases ..	2	1	1	6	...	...	11	21
	Septic Arm	...	...	1	...	...	...	1	2
	No appliances, dirty house	1	...	...	...	...	...	...	1

† These midwives were reported to the Central Midwives Board during the year 1913.

DETAILS OF THE WORK OF THE EXECUTIVE OFFICER.

Inspection Visits to Midwives.

278 inspection visits were paid to midwives. In 181 instances the midwives were at home; in 52 cases the visits were paid in connection with Puerperal Fever; in one for Erysipelas; two for Typhoid; seven for Scarlet Fever; two for Diphtheria; 16 Pemphigus Neonatorum; and 12 cases for infectious and septic conditions. In each instance the midwife was duly disinfected.

During the year midwives were interviewed on 174 occasions at the Public Health Office. In some instances these interviews were at the request of the Executive Officer, for the purpose of going over the rules, or for practising pulse and temperature taking.

The routine method of inspection followed has been in use since 1905. It comprises:—

1.—Examination of the sanitary condition of the houses:

In one instance defects were reported to the Sanitary Department, and were dealt with by that Authority.

Two cases reported to Sanitary Authority owing to the dirty condition of house.

In five instances the houses were very badly kept, and dirty. In all the five cases the matter was rectified by the midwife.

2.—Inspection of the bag of appliances:

In 10 instances the bags were unsatisfactory and incomplete, and one contained rusty scissors. In all 10 of these the bags and contents were, in addition, soiled. One midwife was suspended for five days until her bag was made satisfactory.

The confinement bags as a whole are properly equipped, but the practice of carrying insufficient appliances to the daily visits is unfortunately continued in many instances.

3.—Examination of registers, medical aid record books, notification books, and temperature record books:

Registers.

The registers are for the most part well entered. In four cases they were not up-to-date, and some of these were not fully entered.

Records of Calling in Medical Aid.

Table F gives the reasons for which medical aid was called. In a few instances there had been some delay. In each case the attention of the midwife was drawn to the requirements of the rules.

Temperature Record Books.

The temperature and pulse records as a whole have been well kept. In only 3 instances were the records found unsatisfactory.

4.—Inspection of washing dresses and aprons:

The midwives for the most part have a sufficient number of dresses and aprons, but in 2 instances the washing dresses and aprons were insufficient to insure cleanliness.

PUERPERAL FEVER.

During the year 1914, 105 cases of Puerperal Fever were notified. Of these, no less than 20 occurred after abortion or premature labour.

Of the abortions, 8 were at the second or third months of gestation, 5 at the fourth month, 3 at the sixth month, 3 at the seventh month, and 1 during the eighth month of pregnancy.

The total fatal cases numbered 23, of which 5 were premature labours; in several of these the doctor had not been called in until some days after the onset of illness.

The date of onset of fever was in 70 cases within the first four days after delivery; in 21 the attack began from the fourth to the eighth day; in 7 from the eighth to the tenth day; and in 7 instances on or after the tenth day of the puerperium.

Of the 23 deaths, 4 took place in the first week after confinement; 8 during the second week; 10 during the third and fourth weeks; and in 1 instance the fatal termination supervened during the second month from delivery.

The cases were notified in 80 instances within three days of the onset of symptoms; in 17 cases from the fourth to the seventh days of illness; while 7 notifications were received during the second and third weeks of illness, and in one instance as late as the fifth week.

In 49 cases midwives alone were present at the confinements. They called in doctors within 24 hours from the onset of fever in 35 cases; within 2 days in 10 instances; on the third day on 3 occasions; and on the 4th day on one occasion.

Table B.—Giving in Districts for 1914 the Population of Manchester; Births and Birth-rates; Cases, etc., of Puerperal Fever; and the Number of Midwives Resident in each District.

Statistical Divisions	Population	Births Registered		Cases of Puerperal Fever				Case Fatality per cent. 1905-1913	1914 Midwives resident in Manchester.
		Number	Rate	Total Attacks	Deaths	Attack rate per 1,000 births	Case Fatality per cent.		
City of Manchester	**739,136**	**18,697**	**25·30**	**105**	**23**	**5·61**	**21·9**	**21·9**	**128**
I. Manchester Township	110,603	3,558	32·17	12	2	3·37	16·7	21·5	11
II. North Manchester	209,114	5,263	25·17	32	8	6·08	25·0	27·3	38
III. South Manchester	419,419	9,876	23·55	61	13	6·18	21·3	19·2	79
I. Ancoats	39,831	1,369	34·37	2	1	1·46	50·0	32·2	6
Central	20,633	517	25·06	5	1	9·67	20·0	9·8	..
St. George's	50,139	1,672	33·35	5	..	2·99	..	18·9	5
II. Cheetham	44,218	998	22·57	5	..	5·01	..	24·4	8
Crumpsall	10,608	184	17·35	..	..	..	..	44·4	..
Blackley	14,914	284	19·04	1	1	3·52	100·0	33·4	2
Harpurhey	17,531	481	27·44	5	3	10·39	60·0	28·6	2
Moston	26,664	640	24·00	5	..	7·81	..	40·0	5
Newton	42,988	1,061	24·68	3	1	2·83	33·3	27·1	11
Bradford	25,617	823	32·13	9	2	10·93	22·2	19·2	4
Beswick	12,174	405	33·27	4	1	9·88	25·0	18·5	3
Clayton	14,400	387	26·88	..	..	..	..	41·2	3
III. Ardwick	39,621	1,135	28·65	8	2	7·06	25·0	19·7	9
Openshaw	32,064	887	27·66	6	..	6·77	..	25·7	4
West Gorton	26,884	822	30·58	5	2	6·09	40·0	17·1	4
Rusholme and Kirkmanshulme	43,833	809	18·46	4	1	4·95	25·0	30·3	8
Chorlton-upon-Medlock	54,192	1,241	22·90	7	1	5·65	14·3	15·1	17
Hulme	62,698	1,922	30·65	11	1	5·72	9·1	18·9	8
Moss Side	35,823	552	15·41	4	1	7·24	25·0	29·2	9
Withington	55,572	974	17·53	2	..	2·05	..	17·2	7
Gorton	46,095	1,135	24·62	9	2	7·94	22·2	8·3	8
Levenshulme	22,637	399	17·63	5	3	12·53	60·0	10·0	5

Section of Table B giving the number of Midwives resident outside but practising in Manchester.

Salford	8
Failsworth	5
Stretford	8
Reddish	3
Heaton Chapel	2
Seven other Districts (1 each)	7
Total	33

Table C.—Relating to the Cases of Puerperal Fever attended either by Midwives or Doctors during the Years 1905 to 1914.

Year	Number of cases attended by							
	Midwives		Doctors		Midwife and Doctor		Total	
	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
1905	41	11	31	11	10	3	82	25
1906	32	6	54	20	17	4	103	30
1907	35	4	39	9	21	7	95	20
1908	37	7	50	13	14	4	101	24
1909	33	7	34	5	15	5	*84	17
1910	41	6	67	22	23	3	131	31
1911	44	4	63	19	28	3	135	26
1912	50	7	38	9	35	5	123	21
1913	51	5	55	11	18	5	124	21
1914	51	6	47	15	7	2	105	23

* Includes two cases unattended.

Table D.—Shows where Patients suffering from Puerperal Fever were treated, and the results obtained, in 1914.

Cases treated at	Total No. of Cases	No. Recovering	No. of Deaths	Case Mortality per cent.
Home	24	20	4	16·7
Monsall Hospital	77	61	16	20·8
Other Institutions	4	1	3	75·0
Total	105	82	23	21·9

TABLE E.—SHOWING FOR CASES OF PUERPERAL FEVER THE CHARACTER OF THE LABOUR AND THE RESULTS FOR 1914; ALSO THE CLASSIFICATION OF ABNORMAL CASES, AND CASES IN WHICH PERINEAL TEAR WAS STATED TO BE PRESENT.

	No. of Cases	Recovery	Death
Normal full term labour	58	48	10
Abnormal full term labour................	28	21	7
Abortion or Premature..................	19	13	6
Abnormal Labour.			
Forceps	25	20	5
Adherent placenta, manual removal	2	1	1
Placenta prævia	0	0	0
Ante and post partum hæmorrhage	3	3	0
Version	2	1	1
Perineal tear stated to be present.			
Labour normal	13	11	2
Abnormal	9	8	0

In each case where the patient recovered, a visit was paid after the fourth and eighth months after the attack, in order to obtain her further health history.

The following tables give the results of these investigations :—

Total cases treated at		Total re-covery	Per cent.	Re-covery with good health	Per cent.	With poor health	Per cent.
Home	24	20	83·3	20	83·3	0	..
Monsall Hospital	77	61	79·2	59	76·6	*2	2·6
Other Institutions	4	1	25·0	0	..	0	..

The remaining four cases were in other Institutions.

* Died of Phthisis.

SUSPENSION OR WITHDRAWAL FROM PRACTICE OF MIDWIVES.

It will be seen from Table A that there were 117 suspensions during the year. In 56 instances these were in connection with Puerperal Fever cases, in 26 on account of Pemphigus, and in 21 for other cases of infectious disease; in practically every instance the midwife was off work only for a few hours, whilst personal disinfection was carried out.

In 14 instances midwives had to be suspended owing to other conditions, in order to prevent possible infection of their patients.

RECORDS OF CALLING IN MEDICAL AID UNDER RULE E 19 OF THE CENTRAL MIDWIVES' BOARD, AND PAYMENT OF FEES IN CONNECTION THEREWITH.

During the year 1914 the number of medical records received was 2,606, as compared with 2,596 in the previous year.

In each instance where a record of rise of temperature, rigor, offensive lochia, abdominal pain, mastitis, or other suspicious symptom, was received, immediate investigations were made.

As regards the payment of fees to medical practitioners, under the scheme outlined in the report for 1905, and revised, as shown in the report for 1909, 757 applications were received during the year. These were considered by the Medical Sub-Committee, and they recommended that payment should be made in 654 cases, amounting to £568 14s., the amount in 1913 being £240 6s. 6d. Of the 103 cases which were rejected as not fulfilling the conditions, in 52 instances the income was above the scale, whilst 37 did not fulfil in various respects the conditions under which the fee is paid; in 5 cases the people paid the fee themselves, and in nine instances they could not be traced owing to late application for fee being made.

PAYMENT OF MIDWIVES' FEES.

On December 3rd the Midwives Supervising Committee arranged to pay the fees of midwives for attendance on the confinements of the wives and widows of soldiers and sailors, and of other women in need of assistance as a result of the War; the fees payable being 15s. for a first confinement and 12s. 6d. for subsequent confinements. The payments are conditional on the income of the family not being in excess of the same scale as that under which medical practitioners are paid, and given in the report for 1913. During the month of December 37 applications were received, and 34 of these were paid, the total amount being £21 15s.

STILL-BIRTHS.

The total number of still-births during 1914 of which there is any return was 638, as compared with 695 in the previous year.

Table F.—Number of Cases occurring in 1914 in which the Midwife advised that a Registered Medical Practitioner should be sent for (Rule E 19). Also the Number of Applications from Medical Practitioners for Payment of their Fees for Attending Certain Emergency Cases.

Period	Medical aid called in on account of the following causes, as stated by the Midwife			Total	Application for * Fees
Pregnancy	Abortions, miscarriages			17	3
	Deformed pelvis			9	..
	Loss of blood			29	6
	Other unusual features of pregnancy			25	1
Labour	Presentations	Head—Malpositions		55	12
		Breech	In primiparæ	1	1
			In multiparæ	2	..
			Para not stated	80	10
		Transverse		20	26
		Funis		21	..
		Unable to make out		12	..
	Tedious labour	Forceps used		12	198
		No record as to forceps		347	19
	Placenta	Retained		33	26
		Adherent		40	21
	Membranes retained			35	17
	Rupture of perineum			431	162
	Hæmorrhage	Ante partum		83	41
		Post partum		26	9
		Hæmorrhage—3rd stage		6	15
	Convulsions			13	6
	Complications			78	8
	Premature labour			49	1
Lying-in	Abdominal swellings			10	..
	Foul-smelling discharges			4	..
	Secondary post-partum hæmorrhage			2	..
	Rigor			2	3
	Rise of temperature above 100·4° F.			76	21
	Unusual swelling of breasts			17	2
	Progress unsatisfactory or complications			96	4
Newly born Child	Injuries received during birth			2	1
	Obvious malformations			40	13
	Tongue tied			24	..
	Feebleness of Child			194	57
	Inflammation of eyes and eyelids			458	39
	Skin eruption			45	6
	Illness from prematurity			39	10
	Malignant jaundice			36	5
	Inflammation about the umbilicus			10	..
	Unspecified or complications			127	14
	Totals			2,606	757

* These applications have been classified according to the conditions requiring treatment found by the medical practitioner.

This number includes 406 still-births which occurred in the practice of doctors, and 232 which occurred in the practice of midwives. The numbers for 1913 were 401 and 294 respectively.

Through the Cemeteries' return, 547 still-births were notified; 406 of these were doctors' cases, and 141 midwives' cases. 91 still-births attended by midwives were notified by them alone, in addition to the 141 cases returned by the Cemeteries, and also notified by them. Each still-birth is now investigated, and in all cases the place of burial is ascertained.

232 still-births were reported by midwives where no doctor had been present. In 52 instances the bodies were perfect; in 65 more or less advanced maceration had occurred; while in 115 cases the bodies had been removed before the visit of the investigator. In 52 instances the midwife was not present at the time of birth, and in one case an inquest was held on this account. In 5 cases the children were very premature, and in 46 the bodies were macerated, and no inquest was necessary.

The following are the causes which it seemed reasonable to credit the still-births to:—

Definite history of ill-health of the mother	38
Probable specific disease from family history	2
Drink, to a marked degree, in one or both of the parents	6
Probable drug-taking to procure abortion	11
Accident to the mother before confinement	37
Ante-partum hæmorrhage	17
Breech presentations, full time	17
,, ,, premature	7
Funis presentations	3
History of cord round neck—midwife present	5
Triplets	1
Abnormally large child	1
Full time twins	4
Premature twins	2
,, births	5
No cause discovered	41
Shock	13
Abnormal presentations	1
Worry	15
Employment of mother	5
Spina Bifida	1
	232

The total number of breech presentations with still-born infants is set forth in the next table.

STILL-BORN INFANTS' BREECH PRESENTATIONS.

1.	No.	2.	No.	3.	No.
Primipara	9	Full time	21	Putrid	2
Multipara	31	Premature	19	Perfect	16
				Not seen	22
	—		—		—
Total	40	Total	40	Total	40

21 of the children who were still-born were known to be illegitimate.

The still-births have been classified in districts; those occurring in the practice of doctors and midwives are shown in separate columns.

This classification shows the percentage of live and still-born children, and the still-birth rate. The still-birth rate is calculated on the returns from midwives, as these returns are very complete.

It will be seen that the percentage of still-born children is 2·8; in 1913 it was 2·9, and the still-birth rate 0·31 per 1,000 of the population in midwives' practice.

The districts in which the still-birth rate is highest are Ancoats, Openshaw, Bradford, West Gorton, and Gorton. These are given in order beginning with the district in which the still-birth rate is highest. (See Table F, on next page.)

BLE G.—Total Number of Births Registered in 1914; also the Number of Still-births occurring in the Practice of Medical Practitioners and Midwives, as obtained from the Returns of Burials at various Cemeteries.

Statistical Divisions		Births Registered	Still-births Classified from Cemetery Returns		Proportion Per Cent.			Total Still-births notified by Midwives	Still-birth-rate per 1,000 of the Population in the practice of Midwives	Total Still-birth-rate return from Cemeteries
			Doctors' Cases	Midwives' Cases	Born Living	Still-born				
						Doctors' Cases	Midwives' Cases			
City of Manchester		18,697	406	141	97·2	2·1	0·7	232	0·31	0·74
I.	Manchester Township	3,558	82	27	97·0	2·2	0·7	34	0·31	0·99
II.	North Manchester	5,263	83	26	98·0	1·5	0·5	58	0·28	0·52
III.	South Manchester	9,876	241	88	96·7	2·4	0·9	140	0·33	0·78
I.	Ancoats	1,369	55	11	95·4	3·8	0·8	11	0·28	1·66
	Central	517	6	1	98·7	1·1	0·2	4	0·19	0·34
	St. George's	1,672	21	15	97·9	1·2	0·9	19	0·38	0·72
II.	Cheetham	998	11	3	98·6	1·1	0·3	9	0·20	0·32
	Crumpsall	184	1	..	99·5	0·5	..	1	0·09	0·09
	Blackley	284	3	..	99·0	1·0	..	..	..	0·20
	Harpurhey	481	3	..	99·4	0·6	..	6	0·34	0·17
	Moston	640	7	..	98·9	1·1	..	3	0·11	0·26
	Newton	1,061	25	5	97·2	2·3	0·5	11	0·26	0·70
	Bradford	823	18	11	96·7	2·1	1·3	15	0·59	1·13
	Beswick	405	7	5	97·1	1·7	1·2	5	0·41	0·99
	Clayton	387	8	2	97·5	2·0	0·5	8	0·56	0·69
III.	Ardwick	1,135	21	11	97·3	1·8	0·9	19	0·48	0·81
	Openshaw	887	22	15	96·0	2·4	1·6	16	0·50	1·15
	West Gorton	822	19	7	97·0	2·2	0·8	15	0·56	0·97
	Rusholme and Kirkmanshulme	809	32	5	95·7	3·8	0·6	14	0·32	0·84
	Chorlton-upon-Medlock	1,241	21	8	97·7	1·7	0·6	19	0·33	0·54
	Hulme	1,922	35	16	97·4	1·8	0·8	23	0·37	0·81
	Moss Side	552	11	5	97·2	1·9	0·9	6	0·17	0·45
	Withington	974	44	5	95·2	4·3	0·5	6	0·11	0·88
	Gorton	1,135	27	16	96·3	2·3	1·4	21	0·46	0·93
	Levenshulme	399	9	..	97·8	2·2	..	2	0·09	0·40

DEATH OF THE MOTHER.

One case of death of mother, before a medical practitioner could be obtained, was notified during the year. The case occurred in the district of Chorlton-upon-Medlock, and was reported to the City Coroner. An inquest was held, the verdict being "Pulmonary Embolism."

DEATHS OF NEW-BORN CHILDREN.

Notifications of 28 deaths of new-born children have been received and investigated.

Enquiries were made by the City Coroner into the causes of these deaths. In 27 instances inquests were held, and 1 was returned as uncertified.

Where the midwife is summoned to appear before the City Coroner in connection with any of these deaths it is customary for an official from the Public Health Office to attend the Court and take a note of the proceedings.

The causes of death were given as follows:—

	Inquest cases.	Uncertified deaths.
Accidental suffocation	12	..
Asphyxia	1	1
Want of attention at birth	10	..
Suffocation—Open verdict	1	..
Others	3	..
	*27	1

* Post-mortem examinations were made in each case.

The districts in which these deaths occurred were Hulme, 5; Ancoats, 4; St. George's, Harpurhey, Bradford, Newton, West Gorton, and Moss Side, 2 each; Cheetham, Crumpsall, Ardwick, Openshaw, Rusholme, Chorlton-upon-Medlock, and Gorton, 1 each.

MIDWIVES REPORTED TO THE CENTRAL MIDWIVES BOARD ON CHARGES OF MALPRACTICE, NEGLIGENCE, OR MISCONDUCT.

During the year the Midwives Supervising Committee, in considering the various reports submitted to them, decided that a *prima facie* case of negligence or misconduct had been established against one midwife, and a report respecting this was forwarded to the Central Midwives Board.

The following are the charges on which such action was based:—

The midwife, who is a Christian Scientist, failed to advise that medical aid should be called in to a woman with severe hæmorrhage. Failed to advise the Local Supervising Authority after assistance had been obtained. The patient died. The Central Midwives Board found the charges to be proved and resolved to censure her severely, and requested the London County Council, in whose district she resides, to report at the end of three and six months regarding her observance of the rules, etc.

Two midwives (Midwives D and I, page 258, 1913) who were reported to the Central Midwives Board during the year 1913 were struck off the Roll during the period now under review.

LEGAL PROCEEDINGS.

No legal proceedings were taken against any midwife during the year.

WORK OF THE SPECIAL NURSES.

During the year 1911 two Special Nurses were appointed by the Midwives Supervising Committee, one for Septic Work and the other for Non-Septic Work. Their duties were printed in the report for that year. The work done by them during the year 1914 has been tabulated, and is as follows:—

Still-births investigated	273
Deaths of newly-born infants investigated	23
Cases of Puerperal Fever nursed at home	26
Nursing visits paid to 26 cases, and to patients with raised temperatures	523
Old Puerperal Fever cases investigated to ascertain subsequent histories	87
New Puerperal Fever cases investigated to ascertain histories	95
Nursing Visits paid to cases of Eczema	8
„ „ „ cases of Mammary Abscess	185
„ „ „ an old Puerperal Fever case, with a vaginal sinus	2
„ „ „ two cases of Erysipelas	10
„ „ „ houses infected with Scarlet Fever	95
„ „ „ „ „ „ Measles	17
„ „ „ „ „ „ Diphtheria	25
Number of cases of Skin affection in newly-born infants	60
Nursing Visits paid to these 60 infants	698
Number of nursing visits paid to cases of Spina Bifida	21
Special investigation into births with a view to checking the practice of midwifery by uncertified women	46

Work of the Special Nurses—*continued.*

Special investigation visit concerning medical records, including visits paid to doctors	114
Visits to Pneumonia and Cardiac cases	158
Nursing Visits paid for midwives during suspension and when unable to obtain a qualified substitute	27
Nursing visits to cases of Varicose Ulcer	23
Special visits to nursing and expectant mothers	163

In addition to the above recorded visits, other visits have been paid in various districts in connection with the control of women formerly on the Midwives Roll, and also of uncertified women suspected to be practising midwifery.

On the outbreak of War in August last it was feared that much hardship and suffering might be entailed by poor pregnant and lying-in women, and the Relief Committee decided to arrange for free meals to be given covering the period of two months prior to confinement, and whilst nursing the newly-born infant and also to provide clothing.

The Medical Officer of Health's Department was authorised to administer this relief, and on the instructions of the Chairman your Executive Officer took charge of the arrangements.

As a first step all the midwives practising in Manchester were invited to a meeting on August 20th to discuss the mode of procedure. The midwives agreed to voluntarily notify, on forms provided, all nursing and expectant women in their practices whose circumstances had been reduced owing to the War, and whom they considered to be in need of assistance either of food or of clothing.

On receipt of these notifications the name and address of the applicant was entered on an investigation sheet, and handed to one of a staff of helpers who volunteered for the work. Enquiries were made into the family circumstances, and on the report was decided the amount and nature of relief required. This was entered on a ticket, which had to be presented by the applicant to one of the specified feeding centres, of which eleven were organised in the poorer districts of the City. The food was prepared by a large caterer in the City, and was delivered daily by the motor omnibus belonging to the Sanitary Committee.

For the necessitous cases who were unable to attend the centres during the puerperium one quart of milk was supplied daily through the nearest dairy. The cost of this was largely borne by the midwives, who opened a private fund for the purpose, and to which they contributed most liberally.

Garments, old and new, were received through many agencies, and were stored and distributed direct from the office.

2,375 cases were thus dealt with, and meals, milk, clothing, and maternity outfits were given.

Great credit is due to the midwives for the very valuable assistance they have given in this work at such an important crisis. Thanks are also due to the ladies who gave so much time in the investigation of the cases, to the ladies and gentlemen who assisted in the organisation and administration of the centres, and to the Sanitary Committee for the use of the motor.

There can be little doubt but that the arrangements made for feeding and clothing poor pregnant and lying-in women, together with the scheme of the Committee for the payment of midwives' fees, will have proved to be very beneficial to these women during this critical period of their lives.

Necessarily the ordinary inspection work has not been carried out to the same extent as in previous years, but from the reports of and interviews with midwives in connection with the relief work, in addition to such inspection as it has been possible to undertake, there is reason to be satisfied that the higher standard of work of the midwives is being maintained.

The relations of the two Special Nurses appointed by this Committee with the doctors and midwives have continued to be most cordial, and their work has been highly valued.

As in former years, the routine clerical work has been carried out by Mr. Dunks, who also gave assistance with relief work, which was very excessive in the later months of the year. Thanks are again due to him for his help throughout the year, and more especially for assisting to compile this report.

In conclusion, the Executive Officer thanks the Midwives Supervising Committee for their support, and the Chairman and the Medical Officer of Health for their guidance and help.

On behalf of the Special Committee,

A. W. CHAPMAN,

Chairman.

30th September, 1915.

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